西湖论坛 III
Westlake Forum III

中美两国医疗改革: 异同与挑战
Healthcare Reform in China and the US: Similarities, Differences, and Challenges

美国佐治亚州亚特兰大 艾默瑞大学
Emory University, Atlanta, Georgia

2011年4月10-12日
April 10-12, 2011
**Agenda-at-a-Glance**

Please check the Detailed Agenda for expanded session information.

### Sunday, April 10

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>12:00 pm – 7:00 pm</td>
<td>Registration Open — Great Hearth Foyer</td>
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<tr>
<td>4:00 pm – 6:00 pm</td>
<td>Opening Ceremony — Emory Amphitheatre</td>
<td>Emory Amphitheatre</td>
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<tr>
<td>6:00 pm – 7:00 pm</td>
<td>Poster Reception — Salons IV, V</td>
<td>Salons IV, V</td>
</tr>
<tr>
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<td>Speaker &amp; Dignitary Dinner (by invitation only) — Hickory</td>
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<tr>
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<tr>
<td>8:30 am – 10:15 am</td>
<td>Plenary Session I: Healthcare System Overview &amp; Cost of Care — Emory Amphitheatre</td>
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<td>10:15 am – 10:45 am</td>
<td>Morning Refreshment Break — Emory Break Area &amp; Oak Break Area</td>
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<td>Concurrent Breakout Sessions I: Cost of Care</td>
<td>Salons I, II, III</td>
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<td>Integrated Delivery Systems</td>
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<td>Networking Lunch — Salons I, II, III</td>
<td>Salons I, II, III</td>
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<td>2:00 pm – 3:15 pm</td>
<td>Plenary Session II: Access to Care — Emory Amphitheatre</td>
<td>Emory Amphitheatre</td>
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<td>3:15 pm – 3:30 pm</td>
<td>Afternoon Refreshment Break — Emory Break Area &amp; Oak Break Area</td>
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<td>Concurrent Breakout Session II: Access to Care</td>
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<td>Access to Essential Prevention Services</td>
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<td>Mountain Laurel</td>
<td>Access to Social Health Insurance Schemes</td>
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<tr>
<td>Starvine I</td>
<td>Access for Special Populations</td>
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<tr>
<td>5:00 pm – 6:30 pm</td>
<td>Poster Session — Salons IV, V</td>
<td>Salons IV, V</td>
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<tr>
<td>6:30 pm – 8:00 pm</td>
<td>Networking Dinner — Salons I, II, III</td>
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</tr>
<tr>
<td>8:30 am – 10:00 am</td>
<td>Plenary Session III: Quality of Care — Emory Amphitheatre</td>
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<tr>
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<td>Concurrent Breakout Session III: Quality of Care</td>
<td>Salons I, II, III</td>
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<tr>
<td>Hickory</td>
<td>Information Technology and Electronic Medical Records</td>
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<tr>
<td>Mountain Laurel</td>
<td>Measuring and Improving Quality of Care</td>
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<tr>
<td>Starvine I</td>
<td>Comparative Effectiveness and Practicing Evidence-Based Medicine</td>
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<td>Networking Lunch — Conference Center Dining Room</td>
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<td>2:00 pm – 3:00 pm</td>
<td>Closing Ceremony — Emory Amphitheatre</td>
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<tr>
<td>3:00 pm</td>
<td>Cultural &amp; Professional Tours (optional) — Various Locations*</td>
<td>Various Locations*</td>
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*Please check Detailed Agenda for locations.
Dear Colleagues,

It gives us great pleasure to welcome you to the Emory Conference Center Hotel, Atlanta, Georgia, the site of Westlake Forum III — *Healthcare Reform in China and the US: Similarities, Differences and Challenges*. Westlake Forum III is the third conference in the Westlake series, and the first to be held in the United States. You are joining attendees from leading academic and governmental institutions in China and the United States to examine and compare healthcare reform in the two countries and its impact on cost, quality and access to care. Through a series of plenary and break-out sessions, poster sessions, and networking lunches and dinners, participants will have unique opportunities to advance concrete collaborations in research, educational exchanges, and university partnerships.

Westlake Forum is a series of symposia initiated by Zhejiang Medical University and China Medical Board. The purpose of this forum is to provide a platform for university academicians and government officials to discuss major health policy issues. The first Westlake Forum was held in May 2007 with the theme of Health Equity and Health Security Systems. The second forum, Healthy China 2020: Policy and Action, was held in February 2009. Both forums were convened at the famous West Lake in the city of Hangzhou. This year’s symposium is being co-hosted by the Emory Global Health Institute, Zhejiang University School of Medicine, and the China Medical Board.

We hope that you enjoy your stay here in Atlanta, and look forward to a successful meeting!

Yours sincerely,

Jeffrey P. Koplan, MD, MPH  
Vice President for Global Health  
Emory University and Director,  
Emory Global Health Institute

Yu Hai, MD, PhD  
Director of CMB Programs  
Zhejiang University School of Medicine

Lincoln Chen, MD, MPH  
President  
China Medical Board
Dear Colleagues,

Welcome to Westlake Forum III, the third in a series of symposia initiated by Zhejiang University School of Medicine and the China Medical Board (CMB). We are truly honored to co-host this prestigious event at Emory University, and are grateful to Zhejiang and CMB for their hard work, wise counsel and financial support throughout the symposium planning process.

We have much in common when it comes to healthcare reform. A US citizen reading about China’s five healthcare reform priorities, which address key issues such as expanded coverage, equal access, improved benefits, improved care delivery systems and containment of soaring medical costs, might well think she is reading an article about the US Patient Protection and Affordable Care Act. Similarly, citizens of China will find themselves in familiar territory when they read about healthcare reforms in the United States that seek, among other things, to move the US toward universal insurance coverage and to bring new focus to effective care coordination.

During the course of the next three days, we will together explore our conference theme Healthcare Reform in China and the US: Similarities, Differences and Challenges. Through three plenary sessions, 12 invited panels, and nearly 50 poster presentations, we will examine cost, quality and access to care in our two countries through the lens of healthcare reform. And throughout the symposium, we will explore opportunities to initiate new collaborations on topics of mutual importance.

With healthcare reform as our focus, we gather today as scholars, administrators, government leaders, and interested citizens to learn from one another and to share our experiences, knowledge, and plans for the future. We hope that this symposium provides each of us with new ideas, new perspectives, and new networks of colleagues. On behalf of Emory University and the Emory Global Health Institute, I welcome you to Westlake Forum III and wish you an exciting and productive symposium.

With warm personal regards,

Jeffrey P. Koplan
Vice President for Global Health
Director, Emory Global Health Institute
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Acknowledgements

We would like to express our gratitude to all those who contributed to the planning and development of Westlake Forum III — Healthcare Reform in China and the US: Similarities, Differences and Challenges.

Chen, Lincoln, MD, MPH
President
China Medical Board

Chen, Zhuo (Adam), PhD, MS
Senior Economist
Office of the Associate Director for Policy
US Centers for Disease Control and Prevention

Koplan, Jeffrey P., MD, MPH
Vice President for Global Health, Emory University
Director, Emory Global Health Institute

Waters, Roseanne
Administrator
Emory Global Health Institute

Xu, Dong (Roman), MPP
Director of Beijing Office
China Medical Board

Yu, Hai, MD, PhD
Director of CMB Programs
Zhejiang University School of Medicine

Zhou, Linda
Program Associate
China Medical Board
**General Information**

**Registration Services**

Registration will be located in the Great Hearth Foyer in the Emory Conference Center Hotel. Here you can pick up your materials and sign-up for the Cultural and Professional Tours. Registration will be open during the following hours:

- **Sunday, April 10** .......................................... 12:00 pm – 7:00 pm
- **Monday, April 11** ........................................... 7:00 am – 7:00 pm
- **Tuesday, April 12** ........................................... 7:00 am – 3:30 pm

**Badges**

Badges should be worn at all official functions of the meeting. Badge checkers will be stationed throughout the meeting areas. If you forget or lose your badge, you may obtain a second badge at the Registration Desk with proof of identification.

**Certificates of Attendance**

Certificates of Attendance will be provided to all registered attendees. You may pick-up your Certificate of Attendance after the end of the Closing Ceremony. Certificates will be distributed at the Registration Desk.

**Meals & Refreshments***

All registered attendees will be provided with the meals and refreshments listed below. All meals and refreshments will be served in the designated area at the Emory Conference Center Hotel. Please review the Detailed Agenda for locations.

- **Breakfast**
  - Monday ........................................................... 7:00 am – 8:30 am
  - Tuesday ........................................................ 7:00 am – 8:30 am

- **Morning Refreshments (light snacks)***
  - Monday ....................................................... 10:15 am – 10:45 am
  - Tuesday ....................................................... 10:00 am – 10:30 am

- **Lunch**
  - Monday ........................................................ 12:30 pm – 2:00 pm
  - Tuesday ........................................................ 12:30 pm – 2:00 pm

- **Afternoon Refreshments (light snacks)***
  - Monday ........................................................... 3:15 pm – 3:30 pm

- **Dinner**
  - Monday ........................................................... 6:30 pm – 8:00 pm

Light refreshments and hors d’oeuvres will be provided during the Poster Reception on Sunday, April 10 for those in attendance.

*While the above listed times are the scheduled break times of the meeting, refreshments will be available throughout the day for all conference attendees and will be served in the Emory Break Area and Oak Break Area.

**Hotels**

Most attendees will be staying at the following hotels:

- **Emory Conference Center Hotel**
  1615 Clifton Road
  Atlanta, GA 30329
  Toll Free: +1 (800) 933-6679
  Phone: +1 (404) 712-6000

- **Emory Inn**
  1641 Clifton Road
  Atlanta, GA 30329
  Toll Free: +1 (800) 933-6679
  Phone: +1 (404) 712-6000

**Ground Transportation**

Shuttle service will be provided for the optional Cultural and Professional Tours on April 12. Please review page 8 for the shuttle schedule for each tour.

Any transportation needs, outside of the shuttle service provided for the tours, are the responsibility of the attendee. There are a number of transportation options to and from the airport as well as in and around the city of Atlanta.

Listed below are several options:

- **MARTA (Metropolitan Atlanta Rapid Transit Authority)**
  Please visit [http://www.itsmarta.com](http://www.itsmarta.com) for transit maps and schedules.

- **AAA Taxi Service**
  Phone: +1 (404) 252-3838

- **All Express Cab & Limo Company**
  Phone: +1 (404) 758-8299

- **Checker Cab Company**
  Phone: +1 (404) 351-8255

Please visit the hotel concierge for additional assistance and recommendations. Please also be sure to keep the address for your hotel with you. You may provide the driver with the hotel address to ensure timely return to your hotel.

**Accessibility for Registrants with Disabilities**

The meeting staff will work with attendees to provide reasonable accommodations for those who have special needs. To request assistance on-site, please check in at the Registration Desk.
Internet Access & Other Hotel Amenities

All attendee guest rooms in both the Emory Conference Center Hotel and the Emory Inn are equipped with complimentary internet. Please note that internet at the Emory Inn is provided via hard wire LAN line. An Ethernet cord is provided for you. If you do not have an Ethernet cord in your room, please contact the front desk for assistance. Free wireless access is also available in all business areas of the Emory Conference Center Hotel. A full-service business center is available for all attendees, should you require fax, copy or print services. A fitness center and pool are available for hotel guests 24 hours/7 days a week.

First Aid

The Emory Conference Center Hotel has a small gift shop equipped with basic first aid supplies. If you are in need of emergency services, hospital, or other medical care, the nearest hospital is as follows:

Emory University Hospital
1364 Clifton Road
Atlanta, Georgia 30322
Phone: +1 (404) 712-2000

Cameras and Recording Devices

The use of cameras and/or recorders is prohibited during the oral presentation sessions. Personal photography is encouraged during the Poster Sessions and at social functions.

Smoking Policy

Please be aware that the Emory Conference Center Hotel and Emory Inn are non-smoking facilities. This policy applies to most public spaces, all meeting spaces, and all guest rooms at both the Emory Conference Center Hotel and the Emory Inn. Guests who smoke in their rooms may be assessed a special $200 cleaning fee. This fee is the responsibility of the hotel guest. Conference organizers are not liable for any cleaning fees incurred.

There are designated smoking areas outside of the main entrance of the Emory Conference Center Hotel, and in the courtyard just outside of the Dining Room.

**Presenter Information**

Plenary & Breakout Session Speakers

ALL Oral Presenters must check with Registration Staff at least 2 hours prior to their scheduled presentation. Even if you have submitted your presentation in advance and have no changes, you must check and confirm that the presentation is correct. You may also make any necessary changes at this time.

If you have not already submitted your presentation, please bring a copy of your presentation to the Registration Desk. Staff will then be sure to pre-upload your presentation to the session computers prior to your session.

Poster Presenters

Approximately 50 posters will be presented at Westlake Forum III. Poster presenters should be present and available to answer questions about their poster during the following formal presentation times:

- Sunday, April 10 .......................... 6:00 pm – 7:00 pm
- Monday, April 11 .......................... 5:00 pm – 6:30 pm

Sessions that take place before the scheduled poster sessions may end early. Please be prepared to present your poster at an earlier time than listed if necessary. Note that the poster session room will be open and available for viewing throughout the conference. You may volunteer to be available for questions during hours other than those listed.

Poster Set-up

You are responsible for preparing and printing your own poster. Posters may be set-up in Salons IV, V between 12:00 pm and 4:00 pm on Sunday, April 10. Velcro and push-pins will be provided for all presenters.

Poster Tear-down

Posters are expected to remain available for viewing until 3:00 pm on Tuesday, April 12. At this time you may begin tearing down your poster. Presenters will have until 4:00 pm, Tuesday, April 12 to remove their poster. Any posters remaining after that time will be discarded.
### Detailed Agenda (as of March 30, 2011)

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**Introduction & Overview**

**Presenters:** Koplan, Jeffrey P., Vice President for Global Health, Emory University, and Director, Emory Global Health Institute; Yu, Hai, Director of CMB Programs, Zhejiang University School of Medicine; and Chen, Lincoln, President, China Medical Board

**Welcome**

**Presenters:** Wang, Longde, President, Chinese Preventive Medicine Association; Li, Mengfeng, Vice President, Sun Yat-sen University; and Caughman, Wright, Interim Executive Vice President for Health Affairs, Emory University, Health Affairs

**Healthcare Reform in China**

**Presenter:** Speaker Invited

**Healthcare Reform in the US**

**Presenter:** Koh, Howard, Assistant Secretary for Health, United States Department of Health and Human Services

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**China Healthcare System Overview**

**Presenter:** Speaker Invited

**The US Healthcare System — Current and Future**

**Presenter:** Roper, William, Dean, University of North Carolina (UNC) School of Medicine, and CEO, UNC Health Care System

**Healthcare Reform: Overview of Cost and Financing**

**Presenters:** Hsiao, William, K.T. Li Professor of Economics, Department of Health Policy and Management, Department of Global Health and Population, Harvard University; and Thorpe, Kenneth, Professor and Chair, Department of Health Policy and Management, Rollins School of Public Health, Emory University

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**Breakout Session A: Incentive Structure**

**Hickory**

**Moderator:** Thorpe, Kenneth, Professor and Chair, Department of Health Policy and Management, Rollins School of Public Health, Emory University

**Presenters:** Yip, Winnie, Professor, University of Oxford; and Thorpe, Kenneth, Professor and Chair, Rollins School of Public Health, Emory University
### Detailed Agenda (Continued)

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<td>Breakout Session B: Professionalism — Role of the Doctor in Self-Regulation/Self-Constraint</td>
<td>Oak Amphitheatre&lt;br&gt;<strong>Moderator:</strong> Hsiao, William, K.T. Li Professor of Economics, Department of Health Policy and Management, Department of Global Health and Population, Harvard University&lt;br&gt;<strong>Presenters:</strong> Guo, Yan, Professor, School of Public Health, Peking University; and Eley, William, Executive Associate Dean/Medical Education and Student Affairs, Ada Lee and Pete Correll Teaching Professor, Professor, Hematology/Oncology, Emory University</td>
</tr>
<tr>
<td>Breakout Session C: Financing — Social v. Private Health Insurance</td>
<td>Mountain Laurel&lt;br&gt;<strong>Moderator:</strong> Speaker Invited&lt;br&gt;<strong>Presenters:</strong> Ma, Jin, Professor, Shanghai Jiao Tong University; and Saltman, Richard, Professor, Health Policy and Management, Rollins School of Public Health, Emory University</td>
</tr>
<tr>
<td>Breakout Session D: Integrated Delivery Systems</td>
<td>Starvine I&lt;br&gt;<strong>Moderator:</strong> Speaker Invited&lt;br&gt;<strong>Presenter:</strong> He, Chao, Professor and President, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine</td>
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<td><strong>Publishing Opportunities</strong></td>
<td>&lt;br&gt;<strong>Presenter:</strong> Phillips, Michael, Director, Suicide Research and Prevention Center, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine</td>
</tr>
<tr>
<td><strong>Healthcare Reform in China: Improving Access to Care</strong></td>
<td>&lt;br&gt;<strong>Presenter:</strong> Meng, Qingyue, Director, China Centre for Health Development Studies, Peking University</td>
</tr>
<tr>
<td><strong>Healthcare Reform: Overview of Access to Care and Regulatory Process</strong></td>
<td>&lt;br&gt;<strong>Presenter:</strong> Lumpkin, John, Senior Vice President and Director, Health Care Group, Robert Wood Johnson Foundation</td>
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<tr>
<td><strong>Breakout Session A: Access to Essential Prevention Services</strong></td>
<td>&lt;br&gt;<strong>Hickory</strong>&lt;br&gt;<strong>Moderator:</strong> Collins, Janet, Associate Director for Program, Office of the Director, Centers for Disease Control and Prevention</td>
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<td><strong>Access to Essential Public Health Care Equally in China Health Care Reform</strong></td>
<td>&lt;br&gt;<strong>Presenter:</strong> Yao, Lan, Professor, School of Medical and Health Management, Tonji Medical College, Huazhong University of Science and Technology (HUST)</td>
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<tr>
<td><strong>Preventative Services as Delivered by Local Health Departments: Challenges to and the Role of Accreditation</strong></td>
<td>&lt;br&gt;<strong>Presenter:</strong> Bailey, Stephanie, Health Advisor, Health Data Source</td>
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Breakout Session B: Access to Pharmaceuticals
Oak Amphitheatre
Moderator: Redmon, Pamela, Executive Director, China Tobacco Control Partnership, Emory Global Health Institute, Emory University

Access to Pharmaceuticals in China
Presenter: Chen, Wen, Professor and Associate Dean, School of Public Health, Fudan University

Access to Pharmaceuticals in the Context of the US Health Care System
Presenter: Summers, Cynthia, Executive Director, Bureau of Health Planning, New York City Department of Health and Mental Hygiene

Breakout Session C: Access to Social Health Insurance Schemes
Mountain Laurel
Moderator: Liu, Yuanli, Senior Lecturer and Director, Harvard School of Public Health
Presenter: Blewett, Lynn A., Professor, Division of Health Policy and Management, University of Minnesota School of Public Health

Access to Social Health Insurance in Rural China
Presenter: Liu, Xiaoyun, Associate Professor, China Centre for Health Development Studies, Peking University

Breakout Session D: Access for Special Populations
Starvine I
Moderator: Phillips, Michael, Director, Suicide Research and Prevention Center, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine

The Experiences and Policy Reform of Medical Security for Migrant Workers in China
Presenter: Wang, Jian, Professor in Health Economics, Center for Health Management and Policy, Shandong University

Meeting the Healthcare Needs of Rural People
Presenter: Mueller, Keith, Gerhard Hartman Professor and Head, Health Management and Policy, College of Public Health, The University of Iowa

Prevalence, Disability and Treatment of Mental Disorders in China
Presenter: Phillips, Michael, Director, Suicide Research and Prevention Center, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine

Access to Mental Health Care and Disparities in the United States
Presenter: Bailey, Rahn, Chairman, Department of Psychiatry, Meharry Medical College

5:00 pm – 6:30 pm Poster Session — Salons IV, V
6:30 pm – 8:00 pm Networking Dinner — Salons I, II, III

Tuesday, April 12

7:00 am – 8:30 am Breakfast — Emory Break Area & Oak Break Area
7:00 am – 3:30 pm Registration Open — Great Hearth Foyer
8:30 am – 10:00 am Plenary Session III: Quality of Care — Emory Amphitheatre

Moderator: Koplan, Jeffrey P., Vice President for Global Health, Emory University, and Director, Emory Global Health Institute

Healthcare Reform: Measuring and Improving Quality of Care
Presenters: Hu, Shanlian, Professor, School of Public Health, Fudan University; and Safran, Dana, Senior Vice President, Performance Measurement & Improvement, Blue Cross Blue Shield of Massachusetts

10:00 am – 10:30 am Morning Refreshment Break — Emory Break Area & Oak Break Area
10:30 am – 12:15 pm

Concurrent Breakout Session III: Quality of Care

Breakout Session A: Measuring and Improving Quality of Care (continuation of plenary)

*Oak Amphitheatre*

**Moderator:** Phillips, Michael, Director, Suicide Research and Prevention Center, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine

- Reform and Challenges of Hospital Quality Measurement in China
  **Presenter:** Yu, Wei, Professor of Public Administration, Senior Deputy Dean, School of Public Economics and Administration, Director, Center for Health Policy and Administration, Shanghai University of Finance and Economics

- Measuring and Improving Quality of Care
  **Presenter:** Friedberg, Mark, Associate Natural Scientist, RAND Corporation

Breakout Session B: Information Technology and Electronic Medical Records

*Hickory*

**Moderator:** Mendola, Richard, Vice President, Information Technology and Chief Information Officer, Emory University

**Presenter:** Bornstein, William, Chief Quality and Medical Officer, Emory Healthcare, Emory University

- Information Technology and Electronic Medical Records
  **Presenter:** Wang, Caiyou, Deputy Director, Center for Health Statistics and Information, Ministry of Health

Breakout Session C: Comparative Effectiveness and Practicing Evidence-Based Medicine

*Mountain Laurel*

**Moderator:** Hu, Shanlian, Professor, School of Public Health, Fudan University

**Presenters:** Li, Youping, Professor and Director, China Cochran Center, West China Hospital, Sichuan University; and Kent, David, Associate Professor of Medicine, Tufts Medical Center

Breakout Session D: Managing Healthcare Organizations for Quality

*Starvine I*

**Moderator:** Safran, Dana, Senior Vice President, Performance Measurement & Improvement, Blue Cross Blue Shield of Massachusetts

**Presenters:** Cantor, Michael, Chief Executive Officer/Chief Medical Officer, New England Quality Care Alliance (NEQCA); and Dong, Hengjin, Professor and Executive Director, Center for Health Policy and Management Studies, Zhejiang University School of Medicine

- Overview of Hospital Quality Management in the Context of Healthcare Reform in China
  **Presenter:** Chen, Yingyao, Professor and Assistant Dean, School of Public Health, Fudan University

12:30 pm – 2:00 pm

Networking Lunch — Conference Center Dining Room

2:00 pm – 3:00 pm

Closing Ceremony — Emory Amphitheatre

**Presenters:** Koplan, Jeffrey P., Vice President for Global Health, Emory University, and Director, Emory Global Health Institute; and Yu, Hai, Director of CMB Programs, Zhejiang University School of Medicine

3:00 pm

Cultural and Professional Tours* (please review the next page for tour details)

*Please note that all attendees who wish to join one of the tours must first sign-up. Please visit the Registration Desk to sign-up for your desired tour. Note, spaces for the CDC Global Health Odyssey Museum are no longer available.
Cultural and Professional Tours

Centers for Disease Control and Prevention (CDC) Global Health Odyssey Museum
Shuttles for the tour will depart from the main entrance of the Emory Conference Center Hotel. Those that are registered for the CDC Global Health Odyssey Museum tour were given a colored dot that corresponds to their departure schedule. Please see below for your time of departure:
- Red (Group 1) 3:00 pm (please proceed to shuttle immediately following Closing Ceremony)
- Blue (Group 2) 3:00 pm (please proceed to shuttle immediately following Closing Ceremony)
- Green (Group 3) 3:45 pm
- Yellow (Group 4) 3:45 pm

Lenox Square
One of Atlanta’s most popular shopping destinations, Lenox Square offers close to 250 store options, including Bloomingdale’s, Neiman Marcus, Macy’s, Burberry, Louis Vuitton, Ralph Lauren, and J. Crew. Lenox Square also houses a number of dining options, from fine dining to casual eateries. A shuttle to Lenox Square will depart from the main lobby of the Emory Conference Center Hotel at 3:30 pm. A return shuttle will also be offered from Lenox Square back to the Emory Conference Center Hotel at 7:00 pm. If you wish to stay at the mall beyond that time, you will be responsible for your return to the hotel. Please review the General Information page for transportation options.

Emory Healthcare System
Attendees taking this professional tour will enjoy a 30 minute overview of the Emory Healthcare System, followed by a tour of the Intensive Care Unit and the Rollins Pavilion, hosted by Robert J. Bachman, Chief Operating Officer (COO), Emory University Hospital (EUH). Participants should meet in the Emory Conference Center Lobby promptly at 4:00 pm. Space is limited. Please sign-up for the tour at the Registration Desk.
Bailey, Rahn

Rahn K. Bailey, MD, FAPA, is Chairman of the Department of Psychiatry at Meharry Medical College in Nashville, Tennessee. Dr. Bailey earned his MD from the University of Texas Medical Branch in Galveston in 1990. He completed a residency in Psychiatry at the University of Texas at Houston and Texas Medical Center Affiliated Hospital, and he was Chief Resident from 1993 to 1994. He then served a fellowship in Forensic Psychiatry in the Department of Psychiatry at Yale University in New Haven, Connecticut in 1995. Dr. Bailey has held Assistant Professor clinical teaching positions at University of Texas Medical Center in Houston, Texas, Baylor College of Medicine in Houston, Texas, LSU Medical Center and Tulane in New Orleans, Louisiana. He was promoted to Associate Professor at UAB Medical Center in Birmingham, Alabama. He is certified in General Psychiatry (1998, re-certified 2008) and Forensic Psychiatry (1999, re-certified 2010) by the American Board of Psychiatry and Neurology. He has 17 peer-reviewed articles, 12 invited articles and 1 book chapter published. He has given 27 academic Grand Round and 15 Hospital Grand Round lectures. Dr. Bailey is a member of several professional medical societies. He has received a variety of academic awards and honors, including the Chester M. Pierce, MD, ScD, Resident Research Award (1995) and the National Medical Association (NMA) Postgraduate Physician Section Award (1998). He was named Outstanding Faculty by the University of Texas Medical School in Houston (2000), Region V Physician of the Year by the National Medical Association (2006) for his exemplary efforts in coordinating medical care for victims of Hurricane Katrina. Dr. Bailey was the most recent Recipient of the Isaac Slaughter Memorial Leadership Award (2010). He currently serves as Speaker of the House of Delegates of the National Medical Association (2009-2011), Deputy Representative to the APA assembly from the Black Caucus of the APA, President-Elect of the Tennessee Psychiatric Association (May 2010-2011), President (May 2011-2012).

Bailey, Stephanie

Dr. Stephanie Bailey received her B.A. in Psychology from Clark University in 1972 and her M.D. from Meharry Medical College in 1976. She performed her residency in Internal Medicine at Grady Memorial/Emory University and then went on to obtain her M.S.H.S.A. from the College of St. Francis in 1993. She held the position of Director of Health for the City of Nashville/Davidson County (1985-2006) where she established this department as a nationally recognized department for innovation and results. She recently served for four years as the Chief for Public Health Practice of the Center for Disease Control and Prevention (CDC) (2006-2010) where she oversaw programs and offices focused on public health law, public health system standards, health department agency accreditation, surveillance for emerging issues in public health practice and CDC’s portfolio management to the states. Dr. Bailey is a published author and has spoken internationally, nationally, regionally and locally on many subjects pertaining to public health and healthcare. She has served on a number of committees before and while at the CDC, notably: four appointments to National Advisory Committee by previous HHS secretaries, the National Interagency Committee on Smoking and Health, the Heart Disease and Stroke Prevention Policy Expert Panel, President of the National Association of County and City Health Officials (NACCHO), President of the Public Health Leadership Society, Co-Chair of the National PH workforce Taskforce and a member of the inaugural Health Sector Assembly. Dr. Bailey has been honored with many awards including the “Excellence in Public Health Award” for local Leadership by The Association of State and Territorial Health Officials (ASTHO), the Citizenship Award from Northwest Civitan, an inductee into the Academy for Women of Achievement (YWCA), Milton and Ruth Roemer Prize for Creative Public Health Work (APHA), the Jim Parker Award (APHA), the Dr. Nathan B. Davis Award for Outstanding Government Service in the category, Career Public Servant at the Local levels (AMA), the Balderson Lifetime Public Health Leadership Award, the Howell Special Meretorious Service to Public Health Award (SHA), the Contemporary Black History Maker’s Award and the ESRI Public Health Leadership Award. An abstract co-author with four other colleagues won the Best Conference Abstract Award from among 560 submissions to the 2nd Annual European Public Health Conference jointly sponsored by EUPHA and the Association of Schools of Public Health in the European Region (ASPHER). She was featured in a book authored by Carole Woltring and Carole Barlas entitled, Journey to Leadership: Profile of Women Leaders in Public Health. Dr. Bailey is dedicated to facilitating actions for ‘health results’ She is currently CEO of SBC Bailey & Associates, a consulting company based in community practice for results; an Independent Business Owner and Regional Representative for COMPASS, a Personal Development Company; and Health Advisor for Health Data Source.

Blewett, Lynn A.

Dr. Blewett is a professor in the University of Minnesota, School of Public Health, in the Division of Health Policy and Management and director of the State Health Access Data Assistance Center (SHADAC). SHADAC is funded by the Robert Wood Johnson Foundation (RWJF) to conduct research and policy analysis on the factors affecting health
insurance coverage and to provide technical assistance to state analysts and policy makers in the areas of survey design, data collection and use of federal survey data for state applications. Dr. Blewett also directs the State Health Access Reform Evaluation (SHARE) program, an RWJF initiative to fund and synthesize research on state health reform. She is also funded by the US Health Resources Services Administration to provide technical support of states receiving grants from the State Health Access Program. Dr. Blewett conducts research on the factors affecting health insurance coverage, access and utilization of care from a state policy perspective and has been successful at translating research results to policy action. Dr. Blewett is a member of the National Academy of Social Insurance, was recently appointed by Secretary Sebelius to Chair the Board of Scientific Counselors for the National Center for Health Statistics, serves on the board of the University of Minnesota Medical Center (UMMC) and on the governing board of Academy Health. Dr. Blewett received her master’s degree in public affairs from the Hubert H. Humphrey Institute of Public Affairs, and a doctorate in health services research and policy from the University of Minnesota, School of Public Health.

Bornstein, William

Dr. Bornstein has served as Chief Quality Officer for Emory Healthcare since September of 2003. He was appointed Chief Quality Officer and Associate Administrator of Emory Crawford Long Hospital in 1999 a role that was expanded to encompass the Emory Hospitals starting in 2000 and Emory Healthcare, in 2003. In 2006 he was also named Chief Medical Officer of Emory Healthcare. In these roles, Dr. Bornstein has led the development of a quality and safety program that has been highly successful and visible and has been recognized by a number of awards. In 2006, he led a major expansion of the Emory Healthcare quality program with the formation of a new Emory Healthcare Office of Quality. The Office of Risk and Insurance Services merged with the Office of Quality in 2009, to form the Emory Healthcare Office of Quality and Risk, which Dr. Bornstein directs. Dr. Bornstein has been a champion of the use of information technology to improve healthcare quality. Before assuming his Chief Quality Officer role, he served as the Medical Director of the Emory Healthcare Information Services Department starting in 1996 (referred to as Director of Clinical Development from 1996 to 2001). In this role Dr. Bornstein was a leader in the development of the Emory Healthcare clinical data repository (one of the largest of its kind in the world) and is now a leader of the Emory Electronic Medical Records Project that is implementing clinically transformative technology on the foundation established by the clinical data repository. As Chief Quality and Medical Officer, Dr. Bornstein has retained a focus on ensuring that that implementation of this technology leads to breakthrough improvements in clinical quality and patient safety. Dr. Bornstein is a Board-certified internist and endocrinologist and continues to care for patients. He received his undergraduate degree in mathematics from Dartmouth College and his M.D. and Ph.D. (Cell & Molecular Biology) from the Medical College of Georgia. He did his internal medicine training at Duke, where he served as assistant chief resident, and his fellowship in endocrinology and metabolism at the Massachusetts General Hospital (MGH) and Harvard Medical School. After completing his fellowship, Dr. Bornstein stayed on at the MGH working on the molecular biology of calcium regulation in the laboratory of Dr. Henry Kronenberg, before moving to Atlanta in 1986. Dr. Bornstein is a recognized leader in quality, safety, and the use of information technology in improving healthcare delivery. He has served on a number of national committees and advisory bodies in these areas including the Clinical Evaluative Sciences Council Steering Committee and the Risk Adjustment Task Force of the University Health System Consortium (UHC), the Professional and Technical Advisory Committee for the hospital accreditation process of The Joint Commission, the Standards and Survey Procedures Committee of the Joint Commission, and the steering committees of the Integrating Quality Initiative and Variations Initiative of the Association of American Medical Colleges. Dr. Bornstein was a reviewer for the 2003 Institute of Medicine report, Patient Safety: Achieving a New Standard of Care and is a member of the Staff Leadership Group for the IOM Roundtable on Evidence-Based Medicine. He is on the editorial board of the Journal of Clinical Outcomes Management and has been series editor for The Emory Initiatives appearing in that journal.

Cantor, Michael

Dr. Cantor is a geriatrician and attorney who has experience in designing and implementing quality improvement and care management programs for healthcare providers and health plans. In his current role as Quality Medical Director for the New England Quality Care Alliance (NEQCA), the physician network affiliated with Tufts Medical Center, he oversees staff responsible for implementing network-wide quality improvement and care management programs for almost 1,500 physicians, many of who are in small or solo practices. He has studied and written about advance care planning, telehealth, and care of older adults. Prior to joining NEQCA he was Deputy Medical Director for Evercare of New England, a division of United Health Group that focuses on providing care for Medicare beneficiaries living in nursing homes and the community, and before that was clinical director of the VA New England Geriatric Research, Education and Clinical Center (GRECC), and was Associate Chief for Program Development in the Division of Aging at Brigham and Women’s Hospital. He trained in internal medicine at Beth Israel Hospital in Boston, and did his geriatrics fellowship at Harvard Medical School. He is currently an Assistant Professor of Medicine at Tufts University School of Medicine and sees patients in ambulatory and long term acute care settings. He has degrees in law and medicine from the University of Illinois.
Caughman, Wright

Wright Caughman, M.D., serves as Interim Executive Vice President for Health Affairs, the CEO of the Woodruff Health Sciences Center and the Chairman of the Board for Emory Healthcare. Dr. Caughman received his undergraduate training at Davidson College and completed his M.D. degree at the Medical University of South Carolina in Charleston in 1979. Dr. Caughman completed his residency in Dermatology at the Harvard affiliated hospitals in 1983, then undertook a research fellowship at NIH before establishing his own independent research program there. Dr. Caughman joined the faculty of the Emory University School of Medicine in the Department of Dermatology in 1990 as Associate Professor. He was promoted to Professor in 1996 and became Chair of the department in 1997. Dr. Caughman broadened the portfolio of clinical and basic research in the department through strategic recruitments of both basic and health services research investigators, and through the development of collaborative initiatives throughout the clinical and basic sciences at Emory, Georgia Tech and Morehouse. In addition, he led the clinical training program to be one of the top residency and fellowship programs in the country. With his appointment as VP for Clinical and Academic Integration within the WHSC in 2007, he stepped down from his position as Chair of Dermatology. Beyond his leadership in Dermatology, Dr. Caughman has played key roles in formulating and implementing strategic plans in research, education and clinical service within the School of Medicine and the Woodruff Health Sciences Center. He has served as the Director of the Emory Clinic from 2004-2010 and Executive Associate Dean for Clinical Affairs/Emory Clinic. He serves as Chair of the Board of Directors of The Emory Clinic, on the Board of Directors of Emory Healthcare, and on the Woodruff Health Sciences Center Agenda Committee and Leadership Council. Dr. Caughman has served on and chaired numerous Emory search committees that have resulted in the recruitment of many of our leaders in academic medicine and university administration. Dr. Caughman is a member of multiple national organizations and contributes extensively to the Society for Investigative Dermatology (where he has just completed five years of service as Secretary-Treasurer), the American Academy of Dermatology and the Dermatology Foundation. He has been a member of multiple review committees of various basic and clinical research funding agencies, serves on the Advisory Council of the National Institute of Arthritis, Musculoskeletal and Skin Diseases.

Chen, Lincoln

Lincoln C. Chen is President of the China Medical Board. Started in 1914, the Board was endowed by John D. Rockefeller as an independent American foundation to advance health in China and Asia by strengthening medical education, research, and policies. Dr. Chen was the founding director of the Harvard Global Equity Initiative (2001-2006), and in an earlier decade, the Taro Takemi Professor of International Health and Director of the University-wide Harvard Center for Population and Development Studies (1987-1996). In 1997-2001, Dr. Chen served as Executive Vice-President of the Rockefeller Foundation, and in 1973-1987, he represented the Ford Foundation in India and Bangladesh. In 2008, Dr. Chen assumed the Chair of the Board of BRAC USA, having completed two terms as Chair of the Board of CARE/USA in 2007. He serves as Co-Chair of the Advisory Committee to the FXB Center on Health and Human Rights at Harvard. Dr. Chen also serves on the Board of the Social Science Research Council, the Institute of Metrics and Evaluation (University of Washington), the Public Health Foundation of India, and the UN Fund for International Partnership (counterpart to the UN Foundation). He was the Special Envoy of the WHO Director-General in Human Resources for Health (2004-2007), and the Founding Chair of the Global Health Workforce Alliance (2006-2008). Dr. Chen is a member of the National Academy of Sciences’ Institute of Medicine, the American Academy of Arts and Sciences, the World Academy of Arts and Sciences, and the Council on Foreign Relations. He graduated from Princeton University (BA), Harvard Medical School (MD), and the Johns Hopkins School of Hygiene and Public Health (MPH).

Chen, Wen

He received his Ph.D. degree in social medicine and health management from the Shanghai Medical University in 1998. He attended the University of California at Berkeley in 2000 as a research fellow. Currently he serves as the Deputy Dean of the School of Public Health at Fudan University. His main research interests include health insurance, economic analysis of health policy, and pharmaceutical economics and policy. He has conducted projects sponsored by the National Natural Science Foundation of China, the Alliance for Health Policy and Systems Research, the Ministry of Health and the Ministry of Education. He has published more than 70 academic papers.
Yingyao Chen is a professor of health services at the School of Public Health, Fudan University. He got his Bachelor of Medicine at Shanghai Medical University in 1991, obtained his Masters of Public Health at Shanghai Medical University in 1997, and earned his Ph.D. in management at Fudan University in 2006. He was involved in a visiting scholar program at The University of California, Los Angeles 1999-2001. His academic fields focus on health technology assessment, health policy, hospital management, and health economics. He has published 47 papers in Chinese and 5 papers in English with first authorship. He is the editor-in-chief of Health Services Evaluation, and Disease Burdens of Main Birth Defects and Economic Evaluation of Their Preventive Strategies in China. He is a co-author of 14 books. He is the assistant-to-the-dean of Fudan School of Public Health. He is the deputy director of National Key Lab of Health Technology Assessment, and Department of Hospital Management.

In January 2010, Janet Collins, Ph.D. was named Associate Director for Program in the Office of the Director, CDC. Dr. Collins joined CDC in 1990 as Chief of the Surveillance and Evaluation Research Branch in the Division of Adolescent and School Health. For the past four years, she served as Director of the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) where she directed a diverse portfolio of programmatic and scientific initiatives across ten Divisions. Dr. Collins’ contributions as NCCDPHP Director include establishing the Division for Heart Disease and Stroke Prevention and expanding the Center’s policy and community-based work on tobacco, nutrition, and obesity prevention and control. Dr. Collins earned her Ph.D. in Educational Psychology from Stanford University.

Dr. Dong Hengjin is a Professor and Executive Director for the Center for Health Policy and Management Studies, Zhejiang University School of Medicine. His background is in public health, community medicine, epidemiology, health economics, health management and health systems research. He obtained Bachelor in Public Health and Medicine in 1983, Master of Medical Science in 1986 from SMU. He also obtained Master of Arts in Health Management, Planning and Policy from the Nuffield Institute for Health, the University of Leeds in 1991, and Ph.D. in Health Systems Research from the Division of International Health, Karolinska Institute in 2000. He has been responsible for several projects in the areas of health financing, health economics and health systems research funded by the World Bank, Sida/SAREC and WHO in China. While working in Germany, he was responsible for the research on the introduction and implementation of community-based health insurance (CBI) in Burkina Faso. He has carried out willingness-to-pay study and time preference study. His research at HERG was on the economic evaluation of medical devices, aiming to develop tools and methodologies that effectively assess the value of a medical device product development at each stage of the product life-cycle, from pre-concept to mature product. Hengjin has more than 100 publications including some books. Most are in Chinese and were in the areas of health financing and health systems research.

Dr. Bill Eley is a native of Georgia who received an undergraduate degree in chemistry, an M.D., and an M.P.H. degree, all from Emory University. After completing his Internal Medicine and Oncology training, he accepted a position in the Department of Epidemiology at the newly formed Rollins School of Public Health at Emory University in 1989. His research interests have focused on differences in survival between African-American and Caucasian women diagnosed with Breast Cancer, approaching this problem via population based studies. He has previously worked in clinical oncology at Grady Memorial Hospital and Crawford Long Hospital, and currently continues seeing patients with breast cancer at the Winship Cancer Institute and Emory University Hospital. Dr. Eley has taught medical students clinical epidemiology for the last 15 years. His service on the Medical School Admission's Committee led to his appointment as Associate Dean and Director of Admissions in 2000. In 2004 he was appointed Executive Associate Dean for Medical Education and Student Affairs at the Emory University School of Medicine. Dr. Eley serves on the University Advising Committee on Teaching, the Medical School Admissions Committee, the Medical School Executive Curriculum Committee and Chairs the Fellowship Selection Committee of the International Union Against Cancer (UICC).

Mark Friedberg is an associate natural scientist at the RAND Corporation and a board-certified general internist. His research focuses on the quality of care delivered by primary care practices, the responses of health care provider organizations to performance reporting, the impact of Patient-Centered Medical Home demonstrations, and the distributive implications of pay-for-performance initiatives. He has developed and fielded surveys of medical group leaders, physicians, and other clinical staff. His clinical work has included ambulatory primary care and hospital-based internal medicine, and he is a clinical instructor in medicine at Brigham and Women's Hospital and Harvard Medical School. Dr. Friedberg received his B.A. in economics and statistics from Swarthmore College; his M.D. from Harvard Medical School; and his M.P.P. in health care policy from the Harvard Kennedy School of Government.
Guo, Yan

Yan Guo is a professor at the School of Public Health, Peking University Health Science Center. She is the deputy director of the Institute of Global Health, Peking University and of the China Academy of Health Policy and vice chairman of the Chinese Rural Health Association as well as vice chairman of Chinese Health Education. Professor Guo is an active advocate of health policy, primary health care and rural health in China. Over the years, she has lead a number of large scaled research projects of both national and international significance. These research projects include health education, health service research, maternal and child health care, health policy and health system, as well as health inequity in China. Professor Guo is a Commissioner of the WHO Commission on Social Determinate of Health. Professor Guo got her MD from Beijing Medical University in 1982 and MPH from Tulane University in 2001.

He, Chao

Dr. He graduated from the Medical College of Zhejiang University. Dr. He received fellowships in advanced Colon and Rectal Surgery in the Southwestern Medical Center, Dallas, as well as in West Virginia University (both, US). His major clinical expertise is in the diagnosis and surgical treatment of colorectal cancer IBD and anal diseases. His research interests are on cancer metastasis and gene therapy.

Hsiao, William

William Hsiao is the K.T. Li Professor of Economics and leads a new program in health systems studies at Harvard University. Hsiao received his Ph.D. in Economics from Harvard University. He is also a fully qualified actuary with extensive experience in private and social insurance. Hsiao has conducted health financing and health system studies for more than three decades. He was actively engaged in designing health system reforms and universal health insurance programs for many countries, including the US, China, Colombia, Poland, Taiwan, Vietnam, Hong Kong, Sweden, Cyprus, Uganda and South Africa. In 2011, he designed a single payer universal insurance model for the state of Vermont which intends to serve as a vanguard for the US. Vermont’s governor is drafting legislation to implement his proposal. His current research focuses on developing an analytical model for diagnosing the causes for the successes or failures of national health systems. His analytical framework has shaped how we conceptualize health systems, and has been used extensive by various nations around the world in health system reforms. Meanwhile, Hsiao tests his model by conducting large scale social experiments in several developing nations, including China. Hsiao was elected to be a member of the Institute of Medicine, US National Academy of Science. He was also elected to be a Board member of the National Academy of Social Insurance. Hsiao was named the Man of the Year in Medicine in 1989 for his development of a new payment method (the resource-based relative values) for physician services. He has published more than 170 papers and several books and served on several editorial boards of professional journals. Hsiao served as an advisor to three US presidents, US Congress, the World Bank, the International Monetary Fund, World Health Organization, and International Labor Organization. He is a recipient of honorary professorships from several leading Chinese universities and several awards from his profession.

Hu, Shanlian

Dr. Shanlian Hu, Emeritus Professor of Health Economics, is the Director of Training Center for Health Management at School of Public Health, Fudan University. Director of Health Development Research Center, Shanghai Bureau of Health, the member of Advisory Committee of Health Policy and Management, MOH, Technical Advisory Committee member of Rural Cooperative Medical System and Urban Community Health Services, MOH, the member of Advisory Committee of Ministry of Human Resource and Social Security. In the past 20 years, he was the Coordinator of China Network of Training and Research in Health Economics and Financing, which has been supported by the World Bank and Ministry of Health since 1991. He was awarded as a distinguished young scientist by the Ministry of Personnel Affair, People’s Republic of China in 1992, and received several national Advanced Science and Technology awards in 1990s. He works closely with different Ministries in Central and Shanghai government on health policy research. Over the past two decades, he did temporary consultant for the World Bank, UNICEF, UNDP and AUSAID in China and some Asian countries. At present, he is newly appointed as a member of China healthcare system reform advisory committee by MOH. Dr. Hu received his MSc Degree in 1982 at the London School of Tropical Medicine and Hygiene.
Kent, David

Dr. David Kent is Director of the Clinical and Translational Science (CTS) MS/PhD Graduate Program of the Tufts Clinical and Translational Science Institute (CTSI) and the Sackler School of Graduate Biomedical Sciences, Tufts University. While this program provides research training across the translational spectrum, a major strength of the Tufts CTSI and of the graduate program is comparative effectiveness research (CER). Within the CTS program, Dr. Kent teaches Study Design, Predictive Modeling and Introduction to Clinical Care Research. He is also a Clinical Investigator in the Institute for Clinical Research and Health Policy Studies (ICRHS), Tufts Medical Center, an attending physician in Internal Medicine at Tufts Medical Center and an Associate Professor of Medicine at Tufts University School of Medicine. His principal research interest is in the clinical importance of outcome-risk and treatment-effect heterogeneity in clinical trials and his research has focused primarily on cardiovascular and cerebrovascular disease. Among other projects, he is currently PI of the NIH/NINDS-sponsored Risk of Paradoxical Embolism (RoPE) Study, a multinational study to determine how to select from patients presenting with cryptogenic stroke those likely to benefit from closure of a patent foramen ovale. He is Associate Editor of the journal Trials and Deputy Editor of the Journal of General Internal Medicine. Dr Kent received his MD at McGill University and received an MSc in Clinical Research Design and Statistical Analysis from the University of Michigan, where he was a Robert Wood Johnson Clinical Scholar.

Koh, Howard

Dr. Howard K. Koh serves as the 14th Assistant Secretary for Health for the US Department of Health and Human Services (HHS), after being nominated by President Barack Obama and confirmed by the US Senate in 2009. Dr. Koh oversees 14 core public health offices, including the Office of the Surgeon General and the US Public Health Service Commissioned Corps, 10 Regional Health Offices across the nation, and 10 Presidential and Secretarial advisory committees. He also serves as senior public health advisor to the Secretary. The Office of Assistant Secretary for Health implements an array of interdisciplinary programs relating to disease prevention, health promotion, the reduction of health disparities, women’s and minority health, adolescent health, HIV/AIDS and chronic infectious diseases, vaccine programs, fitness, sports and nutrition, bioethics, population affairs, blood supply, research integrity and human research protections. As the Assistant Secretary for Health, Dr. Koh is dedicated to the mission of creating better public health systems for prevention and care so that all people can reach their highest attainable standard of health. Dr. Koh previously served as the Harvey V. Fineberg Professor of the Practice of Public Health and Associate Dean for Public Health Practice at the Harvard School of Public Health. He was also Director of the Harvard School of Public Health Center for Public Health Preparedness. He has published more than 200 articles in the medical and public health literature in areas such as disparities, cancer control, melanoma and skin oncology, tobacco control, public health preparedness, disease prevention and health promotion, and public health leadership. Dr. Koh served as Commissioner of Public Health for the Commonwealth of Massachusetts (1997-2003) after being appointed by Governor William Weld. As Commissioner, Dr. Koh led the Massachusetts Department of Public Health, which included a wide range of health services, four hospitals, and a staff of more than 3,000 professionals. In this capacity, he emphasized the power of prevention and strengthened the state’s commitment to eliminating health disparities. During his service, the state saw advances in areas such as tobacco control, cancer screening, bioterrorism response after 9/11 and anthrax, health issues of the homeless, newborn screening, organ donation, suicide prevention and international public health partnerships. Dr. Koh graduated from Yale College, where he was President of the Yale Glee Club, and the Yale University School of Medicine. He completed postgraduate training at Boston City Hospital and Massachusetts General Hospital, serving as chief resident in both hospitals. He has earned board certification in four medical fields: internal medicine, hematology, medical oncology, and dermatology, as well as a Master of Public Health degree from Boston University. At Boston University Schools of Medicine and Public Health, he was Professor of Dermatology, Medicine and Public Health, as well as Director of Cancer Prevention and Control. He has earned numerous awards and honors for interdisciplinary accomplishments in medicine and public health, including the Distinguished Service Award from the American Cancer Society, and the Drs. Jack E. White/LaSalle D. Leffall Cancer Prevention Award from the American Association for Cancer Research and the Intercultural Cancer Council. He is an elected member of the National Cancer Advisory Board (2000-2002). A past Chair of the Massachusetts Coalition for a Health Future (the group that pushed for the Commonwealth’s groundbreaking tobacco control initiative), Dr. Koh was named by the New England Division of the American Cancer Society as “one of the most influential persons in the fight against tobacco during the last 25 years.” He was named to the K100 (the 100 leading Korean Americans in the first century of Korean immigration to the United States), and received the Boston University Alumni Award, as well as two honorary degrees. In recognition of his national contributions to the field of early detection and prevention of melanoma, the Boston Red Sox designated him a “Medical All Star” (2003), which included the ceremonial first pitch at Fenway Park. Dr. Koh and his wife, Dr. Claudia Arrigg, are the proud parents of three children.
Koplan, Jeffrey P.

Dr. Jeffrey P. Koplan is Director of the Emory Global Health Institute and Vice President for Global Health at Emory University. Dr. Koplan is also a Co-founder and President of the International Association of National Public Health Institutes (IANPHI). A former director (1998-2002) and 26-year veteran of the US Centers for Disease Control and Prevention (CDC), Dr. Koplan began his public health career in the early 1970s as a member of the CDC’s Epidemic Intelligence Service. He has worked on many major public health issues, including infectious diseases such as smallpox and HIV/AIDS, environmental issues such as the Bhopal chemical disaster, and the health toll of tobacco and chronic diseases around the globe. He has extensive international experience including assignments in Bangladesh, India and Trinidad and Tobago. He has worked in collaborative relationships with Chinese health officials since his first visit to China in 1979. His work has included US-CHINA bilateral projects, World Bank missions and World Health Organization consultations. He is an honorary professor and senior advisor to the China CDC. He is a Master of the American College of Physicians, and a member of the US Institute of Medicine. He has written more than 210 scientific papers. He is a trustee of The Robert Wood Johnson Foundation and The China Medical Board. He chairs the Visiting Committee to the School of Public Health of Harvard University and is on the Board of Advisors of the Health Policy Institute, Beijing University.

Li, Mengfeng

Professor Mengfeng Li is a native of Guangzhou, China. He received his medical degree in 1986 from Sun Yat-sen University of Medical Sciences (now part of Sun Yat-sen University). After receiving his Ph.D. degree in molecular virology and microbiology, he worked at the National Laboratory of Molecular Virology and Genetic Engineering as an assistant investigator from 1991-1993, and completed his postdoc training at Pittsburgh Cancer Institute from 1993 to 1997. While serving at the University of Pittsburgh School of Medicine Department of Pathology as a faculty member for 7 years (1998-2005), he led his research group to study oncogenic viruses and cancer biology and taught courses in “Molecular Pathogenesis of Infectious Diseases” and “Angiogenesis: Physiology and Pathological Significance” to medical and graduate students. Dr. Li then moved back to China and joined Sun Yat-sen University in 2005 as a Cheong-Kung Professor of Microbiology and Medicine. His current scientific interest, national funded research and over 40 scientific publications in international journals are very much focused on molecular signaling mediating, the connection among infection, inflammation and oncogenesis, as well as its clinical significance. He was appointed as a vice president of Sun Yat-sen University and dean of the medical school in 2006. He is also a Discipline (Basic Medicine) Group Member of the Chinese State Council Academic Degree Committee and a member of the National Accreditation Working Committee for the Specialty of Clinical Medicine.

Liu, Xiaoyun

Xiaoyun Liu, PhD, is an associate professor in health system research at the China Center for Health Development Studies, Peking University (CCHDS). Dr Xiaoyun Liu’s research interests focus on health system and health policy, especially in relation to health financing and health human resources. He has extensive research and consultant experiences in developing countries (China, Vietnam, India) in the areas of health insurance, human resources for health, and TB control. He worked as a lecturer on social medicine and health statistics in Fudan University for 3 years before joining Liverpool School of Tropical Medicine, UK in March 2006 where he worked as a lecturer in Health Services Research until 2010. Xiaoyun joined Peking University CCHDS in August 2010 as an associate professor. Xiaoyun Liu obtained his first degree in public health from Shanghai Medical University in 1998, and then studied health statistics for masters degree. He completed his PhD in decentralization and health human resources from Fudan University, Shanghai in 2003.

Liu, Yuanli

Dr. Liu conducts empirical research into health system performance and reform issues. He is the author of more than 70 articles and book chapters on structural analysis of health systems, measurement of medical impoverishment, socioeconomic inequalities in access to essential medicines and healthcare finance, smoking and poverty and other topics. His recent projects include an international study on the roles of private healthcare providers; a comprehensive assessment of China’s health system performance; an intervention study on the impact of rural community medical cooperatives (a consumer-driven healthcare model); major problems of China’s medical pricing and payment systems; and an investigation of the impact and feasibility of increasing cigarette tax in China. Dr. Liu’s evidence-based policy recommendations, which are published in both English and Chinese, helped inform China’s health system reform policy development process, particularly in areas of developing the New Rural Cooperative Medical System, the Medical Assistance Program for the urban poor, portability of social health insurance schemes, and vertical integration of...
healthcare organizations. Dr. Liu is the founding director of the HSPH China Initiative, a major effort at the Harvard School of Public Health aimed at helping advance health and social development in China through a series of applied research studies, annual senior health executive educational programs, and conferences on social development. He is an adjunct professor at the Health and Development Institute of the Tsinghua University School of Public Policy and Management, and he also serves on the Expert Committee on Health Policy and Management of the Chinese Ministry of Health.

**Lumpkin, John**

John Lumpkin, M.D., M.P.H., is the senior vice president and the director of the Health Care Group. He is responsible for the overall planning, budgeting, staffing, management and evaluation of all program and administrative activities for the Robert Wood Johnson Foundation’s Health Care Group. Before joining the Foundation in April 2003, Lumpkin served as director of the Illinois Department of Public Health for 12 years. During his more than 17 years with the department, he served as acting director and prior to that as associate director. Lumpkin has participated directly in the health and health care system, first practicing emergency medicine and teaching medical students and residents at the University of Chicago and Northwestern University. After earning his M.P.H. in 1985, he began caring for the more than 12 million people of Illinois as the first African-American director of the state public health agency with more than 1,300 employees in seven regional offices, three laboratories and locations in Springfield and Chicago. He led improvements to programs dealing with women’s and men’s health, information and technology, emergency and bioterrorism preparedness, infectious disease prevention and control, immunization, local health department coverage and the state’s laboratory services. Lumpkin is a member of the Institute of Medicine of the National Academies and a fellow of the American College of Emergency Physicians and the American College of Medical Informatics. He has been chairman of the National Committee on Vital and Health Statistics, and served on the US Department of Agriculture’s Council on Maternal, Infant and Fetal Nutrition, the Advisory Committee to the Director of the US Centers for Disease Control and Prevention, and the National Institute of Medicine’s Committee on Assuring the Health of the Public in the 21st Century. He has served on the boards of directors for the Public Health Foundation and National Quality Forum, as president of the Illinois College of Emergency Physicians and the Society of Teachers of Emergency Medicine, and as speaker and board of director’s member of the American College of Emergency Physicians. He has received the Arthur McCormack Excellence and Dedication in Public Health Award from the Association of State and Territorial Health Officials (ASTHO), the Jonas Salk Health Leadership Award and the Leadership in Public Health Award from the Illinois Public Health Association. Lumpkin also has been the recipient of the Bill B. Smiley Award, Alan Donaldson Award, African American History Maker, and Public Health Worker of the Year of the Illinois Public Health Association. He is the author of numerous journal articles and book chapters. Lumpkin earned his M.D. and B.M.S. degrees from Northwestern University Medical School and his M.P.H. from the University of Illinois School of Public Health. He was the first African American trained in emergency medicine in the country after completing his residency at the University of Chicago. He has served on the faculty of the University of Chicago, Northwestern University, and University of Illinois at Chicago and has taught at Princeton University.

**Ma, Jin**

Professor Jin Ma, graduated from the University of the Philippines School of Economics and earned his MA on Health Economics. From Harbin Medical University School of Public Health, he earned his PhD on Epidemiology. Professor Jin Ma is an executive Dean of Shanghai Jiao Tong University School of Public Health, Vice Director of Shanghai Health Insurance Training Center and a China national expert on health economics and policy. As a visiting scholar, he was also trained at the Harvard School of Public Health in the US and at the University of Calgary in Canada. He is a vice chief editor of the Journal of Chinese Health Resources and an editorial board member of the Journal of Medicine and Society, the Journal of Chinese Health Policy Research and the Journal of Shanghai Jiao Tong University on Medical Science. His research interest is in health economics and health policy. He received many research grants including the recent Research on the Evaluation Index System of Deepening the Health Care System Reform supported by the Leadership committee of Deepening Health Care System Reform of the China National State Council, study on the theory and practice of Chinese hospital scale efficiency, funded by China Natural Science Foundation(70873083), research on the Exploration of Innovative Way for Public Health Development in Zhejiang Province, China, funded by China Ministry of Health. etc. He has published more than a hundred papers both in international journals, conferences and Chinese journals including Healthcare System from Central Planning to Market-based: Lessons from China published in Health Affairs (Volume27/Number 4, July/August, Page 937-948, 2008) and Child Health Insurance Coverage: A Survey among Temporary and Permanent Residents in Shanghai (BMC Health Services Research, 8:238, 2008). As a consultant, he worked for many projects in recent years, both domestic and international, such as HPSP and the Urban Health Poverty Project supported by DFID, UK, and Regional Health Planning supported by AusAID. Now he is appointed by both the China MOH and NDRC as a China health system reform consultant. In recent years, his research has focused on health system research and health resources allocation.
Mendola, Richard

Richard Mendola, Ph.D. is the Vice President of Information Technology and CIO for Emory University. In this role, Dr. Mendola and his team are responsible for creating and sustaining a seamless, agile, innovative and efficient information technology environment that advances the educational, clinical and research activities and aspirations of Emory, across its academic and healthcare components. Building on a solid IT foundation that was put in place over the past five years, current priorities at Emory include the expansion of Emory Healthcare’s electronic medical record system, more comprehensive data analytics in the clinical, research and administrative areas, and the rollout of an enterprise-wide unified communication system. As part of Emory’s “One IT Experience” project, the institution is moving towards a common identity system, collaboration environment, web services registry and service desk processes. These changes are enhancing the ability of the Emory community to collaborate and leverage synergies in its clinical, research and educational missions. Prior to assuming his current position, Dr. Mendola spent ten years at the University of Illinois, first as CIO of the UIC Medical Center, and then as Associate VP of Administrative IT for the University of Illinois three-campus system. Under Dr. Mendola’s leadership, the UIC Medical Center implemented the core components of their Electronic Medical Record, which would later receive the Nicholas E. Davies award and CIO Magazine’s Enterprise Value award. As Associate VP, Dr. Mendola was the executive responsible for the successful implementation of a single ERP system across the entire University of Illinois system. In addition to his administrative roles, Dr. Mendola has served as a faculty member in the health sciences at the University of Illinois and the University of Connecticut. Dr. Mendola currently serves on the board of the OpenEAI software foundation and is a member of several corporate advisory boards.

Meng, Qingyue

Meng, Qingyue, is Professor in Health Economics and the Executive Director of Peking University China Center for Health Development Studies (CCHDS). Prior to this position, he was Dean of Shandong University School of Public Health. He obtained a MD from Shandong University; a MSc from Fudan University; a M.A. from School of Economics of University of the Philippines; and a PhD from Karolinska Institutet in Sweden. He is a member of the Advisory Committee of Health Policy and Management and a member of the Expert Committee of Tuberculosis Control, to the Ministry of Health; a former Board Member of The Alliance for Health Policy and Systems Research, WHO; and member of the Steering Committee on Social, Economic and Behaviours, TDR. His research interests include health financing and cost-effectiveness analysis of public health programs. Over the past decades, he has led teams conducting dozens of research projects supported by WHO, the World Bank, DFID, EU, and the Chinese government. He provides a number of consultancy services focusing on health policy and systems for the Chinese government through the World Bank, DFID, and Ausaid-funded projects.

Mueller, Keith

Keith J. Mueller, Ph.D., is Gerhard Hartman Professor and Head, Department of Health Management and Policy, College of Public Health, University of Iowa. He is also the Director of the Rural Policy Research Institute (RUPRI) Center for Rural Health Policy Analysis. He has served as President of the National Rural Health Association (NRHA) and as a member of the National Advisory Committee on Rural Health and Human Services. He also served on the Advisory Panel on Medicare Education for the Centers for Medicare and Medicaid Services. He currently serves on the Advisory Committee to the Agency for Health Care Policy and Research. He has published more than 70 scholarly articles in health services research and policy and received awards recognizing his research contributions from NRHA, RUPRI, and the University of Nebraska. Dr. Mueller has directed major health services studies funded by the US Agency for Healthcare Research and Quality, the Federal Office of Rural Health Policy, and the Robert Wood Johnson Foundation. He has testified on numerous occasions before committees of Congress and in other forums, including the Institute of Medicine and the Medicare Payment Advisory Commission. His PhD is in Political Science from The University of Arizona, and he completed a faculty fellowship with The Johns Hopkins University.

Phillips, Michael R.

Dr. Phillips is a Canadian citizen who has been a permanent resident of China for more than 25 years. He received a BSc (psychology) from McGill University, an MD from McMaster University and an MA (anthropology) and MPH (epidemiology) from the University of Washington. He completed his psychiatry residency training at the University of Washington followed by a two-year Robert Wood Johnson Research Training Fellowship. He is currently Director of the Suicide Research and Prevention Center and the Research
Methods Consultation Center of the Shanghai Mental Health Center at Shanghai Jiao Tong University School of Medicine, the Executive Director of the WHO Collaborating Center for Research and Training in Suicide Prevention at Beijing Hui Long Guan Hospital, Professor of Psychiatry and Global Health at Emory University (US), Professor of Clinical Psychiatry and Clinical Epidemiology at Columbia University (US), Visiting Professor at Peking Union Medical College (PUMC), Vice-Chairperson of the Chinese Society for Injury Prevention and Control, advisor on mental health issues in China for the WHO, Treasurer of the International Association for Suicide Prevention, Co-Editor-in-Chief of the Shanghai Archives of Psychiatry, and editorial consultant for The Lancet. Dr. Phillips is currently PI on a number of multi-center collaborative projects on suicide, depression and schizophrenia. He runs a number of research training courses each year, supervises Chinese and foreign graduate students, helps coordinate WHO mental health activities in China, promotes increased awareness of the importance of addressing China's huge suicide problem and advocates improving the quality, comprehensiveness and access to mental health services around the country.

Redmon, Pamela

Pamela Redmon is the Executive Director of the Emory Global Health Institute – China Tobacco Control Partnership (GHI-CTP), located at Emory University. GHI-CTP was established as a result of a five-year grant from the Bill and Melinda Gates Foundation to the Emory Global Health Institute in November 2008. The goal of the GHI-CTP is to reduce the health, social, environmental, and economic burdens of tobacco use by increasing China’s in-country capacity to develop and implement effective, accountable, and sustainable tobacco prevention and control initiatives designed to change the social norms surrounding tobacco use. The two main objectives of the GHI-CTP are to build comprehensive city-level tobacco control programs to prevent initiation among youth, young adults, and women, promote cessation among adults and youth, and eliminate exposure to environmental tobacco smoke; and to establish sustainable national tobacco control resource centers to promote tobacco control research and scholarship and to provide technical assistance and expertise in the areas of surveillance, evaluation, tobacco-related interventions, policy and legal issues, and economics to build capacity among the grantees and other tobacco control programs. Previously, Pamela served as executive director of Emory’s Tobacco Technical Assistance Consortium (TTAC), a team of highly qualified professionals along with a cadre of expert consultants, with expertise in curricula/training development, leadership and coalition capacity building, tobacco control programs, and policy interventions. The TTAC team provides web-based resources, distance learning opportunities, technical assistance and evaluation services, and on-site facilitation and training across the nation and its territories. Pamela holds a Bachelor of Science degree in nursing from Clemson University. Her nursing experiences include staff nurse in critical and coronary care units and as a cardiac rehabilitation specialist. She also served as clinical research nurse manager for NIH-funded cardiology/electrophysiology research prior to securing a masters degree in public health (MPH) from Emory University’s Rollins School of Public Health.

Roper, William

William L. Roper is CEO of the UNC Health Care System and is dean of the School of Medicine and vice chancellor for Medical Affairs at the University of North Carolina (UNC). He also is professor of health policy and administration in the School of Public Health, and is professor of pediatrics and of social medicine in the School of Medicine at UNC. From 1997 until 2004, he was dean of the School of Public Health at UNC. Before joining UNC in 1997, Dr. Roper was senior vice president of Prudential Healthcare. He joined Prudential in 1993 as president of the Prudential Center for Health Care Research. Before coming to Prudential, Dr. Roper was director of the Centers for Disease Control and Prevention (CDC), served on the senior White House staff, and was administrator of the Health Care Financing Administration (responsible for Medicare and Medicaid). Earlier, he was a White House Fellow. He received his MD from the University of Alabama School of Medicine, and his MPH from the University of Alabama at Birmingham School of Public Health. He completed his residency in pediatrics at the University of Colorado Medical Center. Dr. Roper is a member of the Institute of Medicine of the National Academy of Sciences. He is a member of the board of directors of DaVita, Inc., a member of the board of directors of Medco Health Solutions, Inc., a member of the Scientific Management Review Board of the NIH, a member of the board of directors of the Partnership for a Healthier America, and chairman of the board of directors of the National Quality Forum. He lives with his wife Dr. Maryann Roper, a pediatric oncologist, and their son, Will, in Chapel Hill, North Carolina.

Safran, Dana

Dana Gelb Safran is Senior Vice President for Performance Measurement and Improvement at Blue Cross Blue Shield of Massachusetts (BCBSMA). In this role, Dr. Safran leads the company’s initiatives to measure and improve healthcare quality, safety and outcomes. Dr. Safran also retains an active academic practice and is Associate Professor of Medicine at Tufts University School of Medicine. Prior to joining BCBSMA, she was Director of The Health Institute at Tufts-New England Medical Center’s Institute for Clinical Research and Health Policy Studies (ICRHPS). Dr. Safran was among the lead developers of the BCBSMA Alternative Quality Contract (AQC), a provider contract model launched in 2009 with the twin goals of improving quality and outcomes while significantly
Saltman, Richard

Richard B. Saltman is Professor of Health Policy and Management at the Emory University School of Public Health in Atlanta, Georgia. He co-founded the European Observatory on Health Systems and Policies in Brussels in 1998, and is currently head of the Atlanta hub. He is an Adjunct Professor of Political Science at Emory University, a Visiting Professor at the London School of Economics and Political Science, and Visiting Professor at the Braun School of Public Health at the Hebrew University in Jerusalem. From 1991 to 1994, he was Director of the Department of Health Policy and Management at Emory. He holds a doctorate in political science from Stanford University. He has published 17 books and over 130 articles on a wide variety of health policy topics, particularly on the structure and behavior of European health care systems, and his work has been widely translated. In 1987 and again in 1999, he won the European Healthcare Management Association's annual prize for the best publication in health policy and management in Europe. His volumes for the European Observatory book series published by McGraw-Hill Education have been short-listed for the Baxter Prize by the European Healthcare Management Association in 2002, 2004 and 2006.

Schreiner, Rob

Dr. Schreiner has served as the Executive Medical Director for The Southeast Permanente Medical Group, Inc (TSPMG) since 2008. In this role, he leads one of Atlanta's largest multi-specialty medical groups, with overall executive responsibility for the cost and quality of healthcare provided to 240,000 Kaiser Permanente members in 27 medical facilities and 4 hospitals in a 28-county metropolitan service area. Dr. Schreiner joined TSPMG as a Pulmonary and Critical Care Medicine physician in 1994. He has served in a number of leadership roles within the group, including chairs of Continuing Medical Education, the Division of Pulmonary and Critical Care Medicine, and the Department of Hospital Services. From 2005 to 2007, he was TSPMG’s Associate Medical Director for Hospital, Specialty and Ancillary Care. From 2007-2008 he served as COO. He is the past recipient of TSPMG’s “Best Service Provider” (1996), “Physician Educator of the Year” (1998), “Specialist of the Year” (2002), “Physician of the Year” (2003) and “Administrator of the Year” (2004). In addition to his duties at Kaiser Permanente, Dr. Schreiner is active in the Atlanta medical community. He is Treasurer for the Medical Association of Atlanta (MAA). For over ten years, he served in several physician-leadership roles on the Medical Executive Committee (MEC) of Northside Hospital Atlanta. He is also a long-time volunteer at Our Lady of Perpetual Help Home (OLPHH), an Atlanta-area hospice that provides no-cost care for patients with terminal cancer. He recently was appointed as a Board member of Trees Atlanta, a non-profit organization that has been enhancing and preserving Atlanta's urban forest since 1985. Dr. Schreiner is a graduate of the University of Tennessee School of Medicine. He received his graduate medical training in Internal Medicine at Vanderbilt University Hospitals in Nashville, and his fellowship training in Pulmonary and Critical Care Medicine at the University of Colorado Health Sciences Center in Denver.

Summers, Cynthia

Cynthia Summers, DrPH is the Executive Director of the Bureau of Health Planning at the New York City Department of Health and Mental Hygiene. She began working for the health department in 2007, and in her current role, she identifies policy, programmatic and operational opportunities to improve the City’s health care system. Her bureau provides support and expertise to the department for policy development and analysis, particularly in light of health care reform, and engages in research, surveillance and program evaluation to guide and inform departmental activities. Prior to this position, she was the Director of Take Care New York, the City’s comprehensive health policy agenda. Before the health department, Dr. Summers was the Director of Marketing and Public Affairs at a small...
pharmaceutical company in New York City. She was responsible for all media relations, patient and provider education, product marketing, investor relations, Congressional liaising, and small grants programs. Cynthia received her Doctorate degree in Public Health from the University of IL at Chicago where her research was focused on health disparities and maternal and child health. Her dissertation was an ethnographic study of pregnancy intention and reproductive decision making among African American couples. Dr. Summers also has experience in substance abuse prevention, including evaluation of the San Diego Drug Court system, and working with Mexican and US government agencies and community organizations to reduce binge drinking among adolescents. Cynthia received her MPH degree from San Diego State University and her B.S. from the University of Utah.

**Thorpe, Kenneth**

Kenneth Thorpe, Ph.D., is the Robert W. Woodruff Professor and Chair of the Department of Health Policy & Management, in the Rollins School of Public Health of Emory University, Atlanta, Georgia. He is also the executive director of the Emory Institute for Advanced Policy Solutions at Emory University. As executive director of the Partnership to Fight Chronic Disease (PFCD), Thorpe works with a coalition of over 120 national and state-based organizations consisting of patients, providers, community organizations, business and labor groups, and health policy experts to raise awareness of the negative impact chronic disease has on the nation’s health and economy. In addition to holding a number of faculty positions, Thorpe was Deputy Assistant Secretary for Health Policy in the US Department of Health and Human Services from 1993 to 1995. In this capacity, he coordinated all financial estimates and program impacts of President Clinton’s health care reform proposals for the White House. He also directed the administration’s estimation efforts in dealing with Congressional health care reform proposals during the 103rd and 104th sessions of Congress. As the executive director of the PFCD and respected health care expert, Thorpe regularly testifies before numerous committees in the US Senate and House on many aspects of health care reform, including disease prevention, wellness and coordination of care. Thorpe received his Ph.D. from the Rand Graduate School, an M.A. from Duke University and his B.A. from the University of Michigan.

**Wang, Jian**

Professor Jian Wang is a health economist based at the Center for Health Management and Policy in Shandong University. His main duties in research include health insurance reform in both urban and rural China, integration of insurance funds into community health service, ownership study of Chinese hospitals, health and economic growth in rural China, hospital management, and economic evaluation of infectious disease. Dr. Wang worked as a World Bank visiting fellow and a post-doctoral fellow at China Center for Economic Research at Peking University from 2001 to 2004 after gaining his Ph.D degree from Australia. In addition, he was a coordinator of the China session at the IHEA World Congress 2003 China Session. His research was mainly funded by the Ministry of Science and Ministry of Health in China, WB, HPSP supported by DFID, Ford Foundation, and The Research Council of Norway. Furthermore, he has consulted for WB, EU, and UNCHIEF projects in China and Myanmar.

**Wang, Longde**

Wang Longde is the President of the Chinese Preventive Medicine Association. He graduated from the Lanzhou Medical University (in Gansu) in 1969. In 1980, he received a Master degree in Epidemiology from the Chinese Academy of Medical Sciences. From 1980 to 1982, he was a visiting scholar at New York University where he gained additional training in epidemiology. During 1982-1995, Dr. Wang was the division chief, Vice-Director and subsequently Director of the Gansu Provincial Health Bureau. From 1995 to 2007, Dr. Wang served as the Vice-Minister of the Ministry of Health of China. Dr. Wang was elected President of the Chinese Preventive Medicine Association and an Academician of Chinese Academy of Engineering in 2005 and 2009, respectively. He is also the Dean of the School of Public Health at Peking University and Zhejiang University, and serves as Professor at Peking Union Medical University and at Lanzhou University. Over the lifelong time, Dr. Wang has committed himself to working for public health administration, epidemiology and health promotion in China. Under his leadership, a China Information System for Disease Control and Prevention has been established, which is the world’s largest internet-based communicable disease reporting system, allows medical institutions throughout China to rapidly report on notifiable diseases. Dr. Wang has put forward a comprehensive control strategy based on interventions to reduce the rate of transmission of schistosomiasis infection from cattle and humans to snails. A two years study has proved this strategy is highly effective, and the interventions to control human and bovine sources of schistosomiasis infection in snails are now part of the recently introduced Schistosomiasis Prevention and Control Regulations. Since 1981, Dr. Wang has published books and journal articles related to public health,
Yao, Lan

Lan Yao is now the deputy director of Center for China's Basic Medical Security Research. She holds doctor and master's degrees of Epidemiology and Health Statistics from Tongji Medical College, Huazhong University of Science and Technology. Now, she is a professor in this University and is supervising both postgraduates and doctors in Social Medicine and Health Service Management (the sub-major is Health Economics and Policy). Working at health science research for about 20 years, she has published over 80 papers involving in health policy, health reform, health economics, health delivery system and etc. in domestic and overseas journals. She also has published 8 works as chief or associate editor. During the past 15 years, she implemented more than 20 research projects in the national (such as the MOH, MOCA, MOST and etc.) or international (The World Bank, WHO, UNICEF and etc.) levels as the PI and four of her research projects were conferred the "Award for Science and Technology Progress" of Hubei Province or Wuhan City. Her recent research is about health system reform, health insurance. She has abundant overseas educational backgrounds, such as studying in Monash University in Australia for one year, attending the international training course and so on. She is now acting as the evaluation expert of Middle Term Review for Health Care Reform in China, Pilot Evaluation Project of the Urban Residents' Basic Medical Insurance of the State Council etc. She is now the deputy director of Wuhan Health Economics Association.

Yip, Winnie

Winnie Yip received her PhD in Economics from the Massachusetts Institute of Technology, US. She leads several projects on large-scale health system interventions and evaluations in China. She is the champion of the Health Economics module in the MSc in Global Health Science Program and supervises DPhil students. Prior to moving to Oxford, Winnie was Associate Professor of International Health Policy and Economics at the School of Public Health, Harvard University, where she had major responsibilities in doctoral level teaching and advising in international health economics and health systems. Winnie has extensive research and executive training experience in Asia, especially China. She has acted as adviser to the World Bank and other agencies.

Yu, Hai

Yu Hai is the Professor and Director of International Education Programs in Zhejiang University School of Medicine. He graduated from Shanghai First Medical College in 1968 and had been working as a general physician in a rural commune clinic of Ningxia Hui Autonomous Region for 10 years. He received his Ph.D degree of Cancer Research in Leeds University of England in 1983. After his return to China he started working at the Cancer Institute of Zhejiang Medical University as the Deputy Director. He served as the medical consultant for Word Bank Health Projects II and III during 1986-1990. He was the Vice-President of Zhejiang Medical University (1996-1998) and Associate Dean of Zhejiang University School of Medicine (1999-2002). He was a member of 9th National Committee of Chinese Political Consultation Conference (CPPCC). He is the Vice-Chairman of Chinese Society of Family Medicine, Vice-Chairman of Chinese Society of Clinical Epidemiology. Dr Yu also serves as the Vice-Editor-in-Chief, a member of Editorial Board or a reviewer for several peer-reviewed medical journals.

Yu, Wei

Wei Yu, Ph.D., Professor, Senior Deputy Dean, School of Public Economics and Administration; Director, Center for Health Policy and Administration, Shanghai University of Finance and Economics; Adjunct associate, Center for Health Policy, Stanford University. He served as an assistant professor at Boston University Medical School between 1996 and 2000, a fellow at Stanford's Centers for Health Policy and for Primary Care and Outcomes Research, and a health economist at Health Economics Resource Center, US Veterans Affairs Health System between 2000 and 2006. Dr. Yu's research interest includes healthcare financing policy, evaluation of healthcare service, variation in healthcare utilization, and healthcare cost for the elderly. In recent years, he studied China's health system reform, hospital cost management, performance evaluation. He serves as a member of expert committees for the Ministry of Health, Shanghai's Bureau of Health, Jiangsu's Bureau of Finance. Dr. Yu also serves as a member of the editorial board for China Health. Dr. Yu obtained his Ph.D. at Clemson University in 1992 and completed post-doctoral training at Boston University in 1996.

Fan, Amy1; Steiner, Bruce2; Dhingra, Satvinder1; Elam-Evans, Laurie1
1Centers for Disease Control and Prevention; 2Illinois Department of Health

This study was designed to examine the temporal trend of no health care coverage and inability to afford health care among US adults from 2005 to 2009. Behavioral Risk Factor Surveillance System data for 2005 to 2009 from 50 states and Washington DC were analyzed. SUDAAN 9.2 was used to account for the complex sampling design. Lack of health care coverage was defined by a response of “no” to the question “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?” Inability to afford health care was defined by a response of “yes” to the question “Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?” A log-linear regression procedure in SUDAAN was used to examine the association of inability to afford health care with lack of health care coverage, survey year and state, after adjustment for individual covariates (age, sex, race/ethnicity, marital status, education attainment, and employment status). Results: In 2005, about 16.1% of adults in the US reported they had no health care coverage; about 13.5% reported they couldn’t go to see a doctor due to cost during the past 12 months. Four years later, in 2009, about 15.4% of adults in the US reported they had no health care coverage; about 14.9% reported they couldn’t go to see a doctor due to cost during the past 12 months. There were fluctuations over five years but overall linear trends for increased healthcare coverage and decreased affordability were both significant (P<0.001). Overall, adults with no health care coverage were four times more likely to report inability to visit a doctor because of cost. Those who were interviewed in 2009 were 10% more likely to report that they couldn’t see doctors because of cost compared to those in 2005. From 2005 to 2009, an increasing proportion of US adults said they needed to go to the doctor but could not because of cost, despite the overall increasing rate of health care coverage in the population. This apparent paradox may be caused by the worsening economic situation in the US over the past few years.

Primary Author Biography

Dr. Amy Fan obtained her Bachelor of Medicine degree from Beijing Medical University in 1992. She earned her MS in Exercise Science (1998), MS in Biostatistics (2000) and PhD in Health Behavior Research (2002) from University of Southern California. She joined CDC as a Senior Service Fellow in the Cardiovascular Health Branch in 2004. She was transferred to Behavioral Surveillance Branch in 2007. Now she is a Senior Epidemiologist in the Division of Behavioral Surveillance. Her research interests covered a variety of lifestyle behaviors (alcohol consumption, tobacco use, dietary factors, physical activity) in association with cardiovascular health, vision health and mental health. She also did research on how macro-level socioeconomic status factors might be related to health outcomes. In addition to epidemiologic research, she initiated and is coordinating a nationwide BRFSS Data User Webinar. This monthly forum is designed to promote utilization of BRFSS data at state level and facilitate translating scientific findings for policy and program purposes.

(2) MiR-183/96/182 Cluster will be New Therapeutic Targets for Retinal Diseases

Zhu, Qubo1; Sun, Wendy2; Palczewski, Krzysztof2
1Case Western Reserve University; 2Polygenix, Inc.

The objective of this work is to identify retina-specific expressed microRNAs (miRNAs) and implicate them as potential therapeutic targets for retinal diseases. MiRNAs are endogenous short (about 22 nt), non-coding RNA sequences that bind to complementary sequences in the 3’ UTR of multiple target mRNAs, usually inhibiting their translation or causing their destabilization. Several miRNAs are tissue specific; suggesting specialized roles in tissue differentiation and maintenance. MiR-96, miR-182 and miR-183 constitute a polycistronic miRNA cluster called the miR-183/96/182 cluster, which is highly expressed in photoreceptor cells. Although in vitro data from other investigators have demonstrated an important role of this cluster in retina, details of its biological activity in vivo are still obscure. To observe the impact of the miR-183/96/182 cluster on retinal development, maintenance and light-adaptation, we generated a sponge transgenic mouse model to knockdown the expression of these three microRNAs simultaneously and selectively in retina. Although our morphological and functional studies showed no differences between transgenic and wild type mice under normal laboratory lighting conditions, the sponge transgenic mice evidenced severe retinal degeneration after 30 min exposure to 10,000 Lux light. Histological studies showed that the outer nuclear layer thickness was dramatically reduced in a superior site of transgenic mouse retina. Real time PCR experiments in both the sponge transgenic mouse model and different microRNA stable cell lines identified Arrdc3, Neurod4, and caspase-2 (Casp2) as probable downstream genes of the miR-183/96/182 cluster, a result also supported by luciferase assay and western blot analyses. Further studies showed that both miR-183/96/182 clusters and Casp2 increased during light exposure. Casp2 expression was enhanced in transgenic mice because of inhibition of miR-183/96/182 cluster induction by sponge elements. Importantly, light-induced retinal degeneration was prevented by Casp2 inhibition. Making a connection between microRNA and apoptosis pathways, these findings imply an important role for the miR-183/96/182 cluster in acute light-induced retinal degeneration of mice.

Primary Author Biography

Qubo Zhu is a molecular biologist whose interests focus on the microRNA regulations in retina. Dr. Zhu finished his undergraduate studies in Wuhan University, China in 2003 and got his PhD in biomedical sciences from Texas A&M University. Dr. Zhu now works as a postdoctoral fellow in Dr. Krzysztof Palczewski’s lab at Case Western Reserve University.
(3) **Pilot Research on Health Service Dilemma of Pregnant Woman in Floating Population**

**Cai, Yu-yang**; Shi, Li-li; Jiang, Xue-qin; Sebtiu Mohammed, Iman; Godfried, Nortei Nortey; Ma, Jin; Davidsen, Pål, I. 1; 2

1School of Public Health, Shanghai Jiaotong University; 2System Dynamic Group, University of Bergen

Objective: To conduct a policy pilot research on pregnant women in floating population accessing maternal health care in the Jiading District of Shanghai and explore the means of policy to get out of the health service dilemma. Methods: Based on the BEI method, the system dynamic modeling was applied on pregnant's health service system which featured non-linear and dynamic state. Results: The pregnant women in floating population will be frozen in 40% level of natural population increase if the amount of subsidy were adjusted to change the system's behavior. The policy simulation also showed that the balance subsidy was 170 RMB. Conclusion: Policy dilemma will be solved gradually in 5 years with the development of China's health system reform.

**Primary Author Biography**

Cai, Yu-yang, Associate Professor in Faculty of Public Health, Shanghai Jiaotong University School of Medicine. His research focuses on health management and policy, especially on system modeling and policy simulation. Before joining Shanghai Jiaotong University in 2006, he had been in IBM Global Service as a business consultant, where he also developed his research interest in health informatics.

(4) **Association between US Adult Obesity and State and County Economic Conditions**

**Zhang, Qi**; Wang, Youfa

1Old Dominion University; 2Johns Hopkins University

Objective: To examine the relationship between American adults’ body weight status and unemployment rates at the state and county levels. Study Design: Data: We merged 2009 Behavioral Risk Factor Surveillance System (BRFSS) with Local Area Unemployment Statistics (LAUS) by state and county. Outcome variables: Body mass index (BMI) was defined as weight[kg]/height2[m2]; overweight if BMI ≥ 25; and obesity if BMI ≥ 30. Primary exposure variables: State and county annual unemployment rates. Covariates: Age, race/ethnicity, employment status, education and income. Statistical Analyses: Multivariate linear and logistic regression was applied. Analyses were separated by state and county unemployment rates. All analyses took into account the complex survey design in BRFSS. We also stratified analyses by gender and employment status. The analytical sample included 361,570 American adults aged 18 or older. Results: Overall, the state unemployment rate had a negative but insignificant (P > 0.05) relationship to BMI (beta = -0.60), overweight (Odds Ratio [OR] = 0.88) and obesity risk (OR = 0.99). However, the county unemployment rate was significantly associated with higher BMI (beta = 4.64; P < 0.001), overweight (OR = 6.47; 95% Confidence Interval [CI]: 3.69-11.33; P < 0.001), and obesity (OR = 5.50; 95% CI: 3.11-9.71; P < 0.001). The state unemployment rate was positively related to BMI and obesity among men, but negatively associated with BMI among women. Regardless of gender, there were strong and significantly positive associations between the county unemployment rate and body weight status. Among employed adults, BMI was positively related to the county unemployment rate (beta = 4.54, P < 0.001), and so were overweight (OR = 5.81; 95% CI: 2.68-12.61; P < 0.001) and obesity (OR = 5.21; 95% CI: 2.38-11.42; P < 0.001). Among unemployed adults, the county unemployment rate seemed negatively associated with body weight status, but none of the measures were statistically significant. Conclusions: The latest economic recession was associated with American adults’ worsening body weight status, even controlling for individuals’ demographics, income and employment. Local economic conditions were more important than state economic conditions as regard individuals’ obesity risk.

**Primary Author Biography**

Qi Zhang, Ph.D., is a tenure-track Assistant Professor in the School of Community and Environmental Health at Old Dominion University. He is a health economist whose primary research is on socioeconomic disparities in obesity. His current research focus is on economic mechanisms that impact obesity among low-income Americans. Funded by the NIH and the USDA, his current projects study the economic factors contributing to food stamp program participant’s body weight status. His research has been published in Obesity, the American Journal of Clinical Nutrition and Annals of Internal Medicine. He has been a reviewer for twenty-two journals, including JAMA and Obesity, and serves on a grant review committee for the Food Assistance and Nutrition Research Program (FANRP) at the USDA and health care quality and effectiveness research (HCQER) study section at Agency for Healthcare Research and Quality (AHRQ). He also serves on the editorial board of North American Journal of Medicine and Science and was the recipient of Achievement Award from the journal in 2010.
The new health reform started in 2009 has shown Chinese government, especially the central government’s determination to return its responsibility in health sector. The most obvious is to increase government health expenditure (GHE). But firstly, there are still hot debates on whether the government should expend more on health or just deepen the marketization in health sector. Secondly, the local governments take major responsibility of GHE currently and their GHE has not increased as much as proposed after the initiation of new health reform. This research will basically answer two questions: Did the GHE perform really so inefficient? Why did the local governments not expend more on health as expected? It firstly analyzed the necessity of public financing for health care, and secondly discussed how intergovernmental economic competition affect local government’s behavior on health investment under Chinese-style decentralization, known as fiscal decentralization with political centralization. Empirically, using provincial panel data from 1991 to 2007, this research will apply Dynamic Panel Data Model to indentify the effect of GHE on health performance and provide an evidence for the negative impact of Chinese-style decentralization on GHE. Infant mortality and some specific morbility are examined as health performance variables. The structural difference, regional difference and before-and-after SARS difference are all considered. The main findings are: (1) the GHE did improve health performance and this improvement was mainly driven by the GHE through health department directly while not through other governmental departments. However, the local governments lowered the GHE due to pursuing the economic performance and this reduction mainly occurred on GHE through health department. (2) Compared with in the eastern and western regions, this improvement was not significant in middle regions, where the intergovernmental economic competition leads to much less GHE through health department. (3) The outbreak of SARS in 2003 further increased the positive effect from GHE through health department, while the effect from GHE through other departments was not equally significant. All these results illustrates that adjusting the structure of public health financing, reforming the fiscal system and the local government performance evaluation system are critical to Chinese on-going health reform.

Primary Author Biography

Qiulin Chen is a postdoctoral fellow of Shorenstein APARC and a member of the center’s Asia Health Policy Program. His main interest of research is health economics and public finance, focusing on policy and outcome comparison of health care systems and Chinese health reform. Chen earned his Ph.D. in Economics from Peking University in 2010, and earned a B.A. in Business Administration from Nanjing University in 2001. From 2004 through 2008, he was Executive Assistant of the Director of the China Centre for Economic Research at Peking University (CCER). He is also a postdoctoral fellow of National School of Development at Peking University (Its predecessor is CCER). Chen’s recent publication is “The changing pattern of China’s public services” (with Ling Li and Yu Jiang) in Population Aging and the Generational Economy: A Global Perspective (Ronald Lee and Andrew Mason, editors), forthcoming 2011. Before studying in Stanford, he has published more than 10 papers in academic journals in Chinese, such as Jing Ji Yan Jiu (Economic Research) and Zhong Guo Wei Sheng Jing Ji (Chinese Health Economics), and 5 books. He has participated in about 20 research projects, such as A Design of Framework for Healthcare Reform in China which is commissioned by the State Council Working Party on Health Reform, Strategy Planning Study of “Healthy China 2020” which is commissioned by the Minister of Health, and Health Challenge in the Aging Society and It’s Policy Implication funded by Chinese National Natural Science Foundation.
The Paradox of China’s Healthcare Reform

Zhang, Jian; Jiang, Yuan; Yan, Fei; Zhuo, Jiattong

1Georgia Southern University; 2National Tobacco Control Office, Chinese Centers for Disease Control and Prevention; 3Department of Social Medicine, School of Public Health, Fudan University; 4Guangxi Zhuang Autonomous Region Center for Disease Control and Prevention

The objective is to identify the fundamental difference between health care reform in US and China. Embracing and incentivizing prevention, the Patient Protection and Affordable Care Act signed by President Obama stipulates that restaurant chain with more than 20 locations has to virtually display exactly how many calories and nutrients in each food and the employers should provide insurance coverage without cost sharing requirements for evidence-based effective preventive services, including tobacco cessation. In sharp contrast, while China ambitiously promised to provide “safe, effective, convenient and affordable” health care services to all citizens, it also refused to stipulate sufficient warning sign on cigarette packages and ban smoking entirely in offices and indoor public places. The sustainability of China’s health care is critically dependent on a wider alignment of deep-rooted culture and political grandstanding rather than massive funding increases and facility construction. The deadly effects of smoking cigarette remain a remote understanding to the majority of Chinese. Per capita annual alcohol consumption for youth rose to 4.45 liters in 2001 from 0.75 liters in 1970. China is experiencing an epidemic of obesity unprecedentedly and the prevalence of diabetes is approaching 10% among men and women. Tobacco consumption, substance abuse and obesity are the major contributors to skyscraping health expenditure. If China fails to respond to these threats, they will become an economic and welfare time bomb, and China’s health care system, no matter how well funded or equipped, will soon itself be on life support. The government’s addiction to revenues from tobacco and alcohol is seen as the major reason of lack of political will and poor regulatory adherence to foster healthy culture. The year 2011 marks a turning point for global chronic diseases control. Earlier this year was the first time ever that the World Economic Forum put non-communicable diseases on its agenda. In September of this year, the UN General Assembly will hold the first ever UN high-level meeting on chronic diseases. This is an unprecedented opportunity to increase the visibility of devastating damage caused by unhealthy lifestyle, redesign the fundamentally-defected health reform, and avoid band-aid solutions in the future. Specific collaborative opportunities or interests: Best practices of success and deeper lessons from system failure of US health care system.

Primary Author Biography

Jian Zhang, is a Chinese-trained physician with a Master’s degree in Health Economics and a doctorate in Public Health from the University of South Carolina, US. He was a medical epidemiologist Chinese Centers for Disease Control and Prevention (1992-1996); the national program officer; and press secretary for the WHO county office in Beijing (1997-1998). During his tenure with Chinese CDC, he served on various national committees related to immunization and as a technical consultant to a World Bank Health Project. He was the lead designer of the advocacy strategy for the National Submit for the National Immunization Campaign (1994), widely recognized as a milestone in China’s Poliomyelitis Eradication Program. Currently, Jian Zhang is an associate professor of epidemiology in the Jiann-Ping Hsu College of Public Health at Georgia Southern University, US. He teaches epidemiology and global health. Using national survey data, Dr. Zhang’s current research focuses on population-base studies to assess and qualify the influence of nutrients/diets, the most likely contributing and modifiable lifestyle factors, on health. As a leading author, Dr. Zhang has published more than 60 original papers and reviews in leading peer-reviewed journals. Dr. Zhang has also authored chapters in Clinical Prevention and other books. He serves on the editorial board and reviews for various professional journals. Dr. Zhang’s insights into China’s political and health service systems, experience in health service in China, and blended Chinese and American educational background uniquely qualify him to lead the comparative study of the US and Chinese health care reform.

Preliminary Assessment of PM2.5 Exposure During Pregnancy and Low Birth Weight in the US

Hao, Yongping; Flower, Helen; Qualters, Judith R.

Centers for Disease Control and Prevention

Studies of prenatal exposure to fine particulate matter and low birth weight have been inconsistent. We explored whether prenatal exposure to fine particulate matter contributes to low birth weight in the contiguous US and whether such associations vary according to seasonal and geographical variation in PM2.5 (fine particulate matter with aerodynamic diameter less than 2.5 μm). Birth data were obtained from the National Center for Health Statistics and exposure data were derived from the gridded data, estimated by the Environmental Protection Agency for the Environmental Public Health Tracking network. Daily exposure for each individual was assigned as the average concentration during pregnancy and trimester. County poverty rates were obtained from US Census’ small area income and poverty program. Multilevel logistic regression was used to explore the association between low birth weight and prenatal exposure to PM2.5 during the entire pregnancy and by trimester, adjusting for maternal and infant characteristics and county poverty. The association between
low birth weight and maternal exposure to PM2.5 varies by census region/division and season after controlling for relevant risk factors. Although this study focuses on assessing the effect of PM2.5 on low birth weight, similar analytical strategy could be applied to other studies on the association between social/behavioral factors (e.g., access to health care) and health outcomes. Thus, I look forward to a collaborative opportunity to further examine various factors (including but not limited to environmental, social, and behavioral risk factors) on a variety of health outcomes in China and US.

Primary Author Biography

Yongping Hao is a Senior Service Fellow — a mix of Geographer, Statistician and Epidemiologist — with Centers for Disease Control and Prevention (CDC)’s National Center for Environmental Health (NCEH). She came to CDC from Battelle’s Centers for Public Health Research and Evaluation where she was a Principle Research Scientist. Before joined Battelle, she was a Senior Epidemiologist with the American Cancer Society. Her research focuses on social and environmental determinants of disparities in health, healthcare access and health behavior; and methods for monitoring spatial and spatiotemporal patterns in health and evaluating health programs related to healthcare access and behavioral and environmental risk factors. She co-authored peer-reviewed publications in health, epidemiology and geography journals (i.e., Cancer Causes and Control, Health Psychology, Journal of Epidemiology and Community Health, International Journal of Health Geographics, and etc.).

(9) Issues and Challenges Facing Local Government in Practices of Purchasing Public Health Services in Rural China — A Case Study of Heilongjiang Province

Hao, Yanhua; Wu, Qunhong; Gao, Lijun; Ning, Ning; Jiao, Mingli; Sun, Hong; Chen, Fangfang

School of Health Management, Harbin Medical University

Objectives: Among the five priorities of a new round of health system reform in recent years, to promote public health services equalization is one urgent mission, which encourages providing public health services by government purchase. Although the Ministry of Health has issued related guidelines to instruct local government’ practice, there is still practice at detailed operational level that needs to be explored by local government themselves. This article aims to present the current situation and issues facing local government during the process of purchasing public health services for rural residents in Heilongjiang Province. Methods: This study selected four counties of Heilongjiang Province to conduct field investigation in July 2010. Institution questionnaire survey and in-depth interview with key informants from related governmental departments and health services providers were carried out. The contents of this study focused on current situation and issues existing in implementing the process of purchasing public health services and the factual effect of practice. Results: In terms of theoretical framework of purchasing public services, four counties all clearly identified their public health services package based on national guidelines and local health priority. The purchase funds were composed of three sources from central, provincial and county government. Differences existed in identifying potential providers, payment method for services, supervision and evaluation on provider’s performance. Main issues facing local governments are as follows: how to scientifically account cost of services, evaluate and pay provider’s services, ensure the quality of services, etc. Discussions: Although there are many valuable international experiences of purchasing public health services, it is the first systematically exploring practices in government purchase of public health services in rural areas of China. Lack of practical experience is the common feedback from local health officials. Due to limited potential services providers, identifying the contract’s service provider by competition is hard to realize in rural areas at present. Ideas of payment for performance and capacity of performance management, supervision and evaluation of local health administration agency urgently need to be enhanced. Continuously improving the quality of public health service provided in rural areas, especially at village level, is a long-term challenge to ensure the quality of services purchased by government.

Primary Author Biography

Yanhua Hao is an associate professor and the deputy director of Department of Social Medicine, School of Health Management, Harbin Medical University. She received her Master’s degree in Social Medicine and Health Services Management and doctoral degree majored in Epidemiology and Health Statistics at School of Public Health, Harbin Medical University in 1998 and 2002 respectively. In 2004, she went to Latrobe University of Australia for further study. From May 2008 to June 2009, she studied at School of Public Health, University of Toronto, Canada as a visiting scholar. Now she is engaged in teaching and research on social medicine, community medicine, principal and practice of public health, health policy, etc. Since 2000, she has undertaken more than 10 research projects as Principle Investigator or Co-PI on performance evaluation, evaluation study on public health emergency capacity, health services research, health care system reform, etc. Among them, there was one ‘863’ research grant from Ministry of Science and Technology, two projects sponsored by National Natural Science Foundation, and three research projects funded By China Medical Board. Over 50 academic articles were published.

(10) New Estimate of Elasticity of Demand for Healthcare in Rural China

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1Department of Global Health and Population, Harvard School of Public Health; 2Institute of Health Administration and Policy, Xi’an Jiaotong University; 3Centre of Health Statistics and Information, Ministry of Health

Background: Only limited empirical studies reported own-price elasticity of demand for health care in rural China. Neither research on income elasticity of demand for health care nor cross-price elasticity...
of demand for inpatient versus outpatient services in rural China has been reported. However, elasticity of demand is informative to evaluate current policy and to guide further policy making. Objectives: Our study contributes to the literature by estimating three elasticities based on nationwide-representative data. We aim to answer three empirical questions with regard to health expenditure in rural China. Methods: Based on data from the National Health Services Survey, a Probit regression model and a zero-truncated negative binomial regression model were constructed to isolate the effects of price and income on demand for health care. Results: Own-price elasticities of demand for first outpatient visit, outpatient visits among users and first inpatient visit are 0.019, 0.110 and 0.093, respectively. Income elasticities of demand for first outpatient visit, outpatient visits among users and first inpatient visit are 0.114, 0.088 and 0.665, respectively. Study Limitations: First, we use the median medical cost per-visit at the county level and we cannot address variation within the county. Second, we use self-reported consumption to proxy income. Third, our study is restricted to population above 15 years old; therefore, we had no information with regard to health expenditure patterns for infant or children under 15. Conclusion: First, outpatient services are more sensitive than inpatient service to price change. Second, outpatient service is a substitute to inpatient service. Third, the growth of inpatient services is faster than the growth in outpatient services in response to income growth. The major findings from this paper suggest refining insurance policy in rural China through three mechanisms. Key words: elasticity of demand, own-price, cross-price, income, probability of inpatient visit, probability of outpatient visit, substitute.

Primary Author Biography

Yanfang is a third-year doctoral student in Global Health and Population program at Harvard School of Public Health. She is currently a Desmond and Whitney Shum Fellow at Harvard’s Fairbank Center for Chinese Studies. Prior to Harvard, Yanfang was with the Hong Kong Policy and Research Institute as a visiting researcher. Yanfang’s research focuses primarily on health systems from a political economy perspective. Through her research in the Program in Health Care Financing (PHCF), Yanfang has firsthand knowledge of the complexities and challenges of health care reform in China. Currently, she is involved with a 5-year health system experiment in Ningxia, China. Yanfang’s other research interests include measures of health status and health inequality, with a particular interest in how non-tax revenues such as oil rents and foreign aid affect health outcomes. Her studies have addressed critical issues including: community and primary healthcare; hospital capacity; cigarette taxation; lead poisoning; and the relationship between taxation, public debt and social welfare.

(11) International Geriatrics Model Program Development in China: The CMB-Funded Collaboration between Johns Hopkins and Peking Union Medical College

Leng, Sean1; Liu, Xiaohong2; Shen, Ti2; Durso, S. Chris1

1Johns Hopkins University School of Medicine; 2Peking Union Medical College Hospital

The aging imperative no doubt has major impact on healthcare reform both in China and in the United States. China has the largest aging population in the world. Currently, China has estimated 160 million of adults over 60 years of age, more than half of the entire US population. Despite this huge number of older adults and their healthcare needs along with weakening family support, China lacks quality geriatric medicine programs, let alone any well-trained geriatricians (Flaherty JH, et al. China: The aging giant. J Am Geriatr Soc. 2007; 55:1295–1300; Leng SX, et al. The aging population and development of geriatrics in China. J Am Geriatr Soc. 2008; 56:571–3; Kinsella K and Wan H. The US Census Bureau, International Population Reports, P95/99-1, An Aging World: 2008 Washington, DC: US Government Printing Office, 2009; Leng SX, et al. An international model for geriatrics program development in China: The Johns Hopkins-Peking Union Medical College experience. J Am Geriatr Soc. 2010; 58:1376-81). To begin to address this unprecedented challenge, Johns Hopkins University School of Medicine and Peking Union Medical College (PUMC) have developed a joint international project, funded by the China Medical Board (CMB), aimed at establishing a leadership program at PUMC Hospital that will spearhead the development of quality geriatrics care, education, and aging research across China. This presentation will describe the context and history of this collaboration and important components, progress, challenges, and future prospects. It will also discuss what is learned from such a unique experience, opportunities for new collaborations in the development of quality and cost effective geriatrics care models and support services for Chinese seniors, and potential implications in healthcare reform in China.

Primary Author Biography

Dr. Sean Xiao Leng is an Associate Professor of Medicine at Johns Hopkins University School of Medicine. He was born in China and had his initial medical training at Jiangxi Medical College and Peking Union Medical College Hospital. He obtained a PhD in Molecular Virology and Immunology at Texas A&M University and a research post-doctoral fellowship in Immunology and Cytokineology at Yale University. Dr. Leng subsequently completed the internship and residency training in Internal Medicine at St. Luke’s-Roosevelt Hospital Center at Columbia University and the clinical and research fellowship in Geriatric Medicine and Gerontology at Johns Hopkins. He joined the faculty in the Division of Geriatric Medicine and Gerontology at Johns Hopkins in 2002. As a board-certified geriatrician, Dr. Leng provides clinical care to older patients at Johns Hopkins Medicine. In addition to leading the Hopkins - PUMC collaborative effort presented
Reducing the gap in health outcomes between rural and urban areas in China has been a focus of the central government’s health reform efforts since 2002. Drawing on national survey data from 2003 and 2008, this paper analyzes changes in the rural-urban gap for patients with chronic diseases. Overall, there were substantial improvements at the national level in insurance coverage and the use of hospital services for both urban and rural residents with chronic diseases. There was also an overall reduction in the rural-urban gap in the use of inpatient services. But the gains were uneven. For example, although rural Chinese with chronic disease could more easily start inpatient treatment in 2008 than they could in 2003, because of the higher hospital copayments required under insurance coverage for rural citizens, they were more than twice as likely to drop out of treatment as were Chinese in urban areas. The strongest evidence of the narrowing of the rural-urban gap came from central China, while the evidence is mixed for western and eastern China. Our analysis suggests that different approaches will be required to narrow the rural-urban health service gap in different regions of China.

**Primary Author Biography**

Dr. Jian Weiyan is a lecturer from School of Public Health, Peking University Health Science Center. He received his PhD in Health Management from Peking University in 2007. He has been studying health system and health insurance since he worked toward his PhD for 7 years, and has published 13 papers in local and international journals (e.g. Health Affairs and Health Economics) and book chapters on these subjects. In recent years, his research has been focusing on China’s ongoing health system reform, with emphases on health policy evaluation and provider payment. Dr. Jian teaches Health Organization, Health Policy, Health Insurance system in Peking University. He has held research funds from National Natural Science Foundation in China, Ministry of Health of China and Ministry of Education of China and China Medical Board. He has been consultant to both Ministry of Health (China) and Ministry of Health (Beijing) for projects of this nature. He has a successful ongoing collaborative partnership with both ministries as well as the Beijing Bureau of Health.

(12) **Analysis of Equity in China’s Rural-Urban Care for Chronic Disease Patients**

Jian, Weiyan; Chan, Kit Yee; Reidpath, Daniel D.; Xu, Ling

School of Public Health, Peking University

**(13) Standard and Interoperability of Health Information Systems — A Public Health Case Study**

Deng, Xidong; Eichwald, John

Centers for Disease Control and Prevention

Objective: to review recent joint initiatives taken by national and international standards development organizations, health informatics research communities and public health agencies, and using a case study on the Early Hearing Detection and Intervention Program (EHDI) to illustrate how advances in health information technology can be used to achieve interoperability in supporting healthcare improvement. Background: Hearing loss affects two to three infants per 1,000 live births and when left undetected can result in delays in speech and language development. EHDI programs at both the state and federal levels are working to identify and provide necessary services to infants with hearing loss. Currently, each state EHDI program has its own method of data reporting, with wide variation in content and format. Lack of standards and interoperability can result in a slow and error-prone process for data exchange that can lead to delayed treatment or service delivery. Methods: During the past 3 years, the CDC EHDI program, collaborating with several standards development organizations such as HL7 and LOINC®, and other public and private sector stakeholders, has been working on establishing national standards within the EHDI tracking and surveillance process to achieve interoperability between electronic health record systems (EHR-S) and state EHDI information systems. Results: We provide an overview of the process and results in different stages of the standards development lifecycle including use cases, data standards, EHR-S functional profiles, compliance and conformance testing standards and tools, and quality measures. Conclusion: Standards and Interoperability are integral factors in the design, development, and implementation of a fully connected health information infrastructure that will enhance efficiency, quality and effectiveness in healthcare delivery. To achieve interoperability that allows health information systems to work together within and across organizational boundaries, we need to take advantage of the full potential of the current state of art in health informatics and develop and implement standards and technology harmonizing disparate systems and domains. Collaborative opportunities/interests: Interested in collaborating with national/international academic and public health programs in health IT and health informatics related areas.

**Primary Author Biography**

Xidong Deng is a health scientist at the National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention (CDC). She holds a PhD in Computer Science and Engineering from Pennsylvania State University. Her current interests are in controlled vocabulary and data standards, distributed computing, interoperability and health information exchange, EHR systems, and evaluation of health information systems.
Objective: To summarize the experience learnt in improving the quality of care for cardiovascular disease (CVD) in the US over the past two decades, which may shed the light for similar ongoing efforts in China. Background: CVD remains the leading cause of death and accounts for more than one third of deaths in the US, despite the decline over the past few decades, while both mortality and morbidity rates for CVD have increased in China. CVD is also the leading cause of death. Treatment for this disease accounts for $1 in every $6 US healthcare dollars spent. Economic burden to the society is huge and is not going to sustainable if no effective strategies to prevent and control the disease are implemented. Methods: Initiatives, programs and activities implemented by government and non-government organizations to improve the quality of care for CVD in the 1990s and 2000s were reviewed and assessed. Key indicators include those for preventive care, acute and emergency care, and regular clinical care and the trends over the years will be highlighted in the presentation. Summary: Numerous efforts have been made by federal, state and local government departments and agencies in this area in the past two decades. Notable nongovernmental activities are from the American Heart Association, American College of Cardiology, National Committee for Quality Assurance, the Joint Commission on Accreditation of Healthcare Organizations and other professional organizations/societies. Public reporting of the performance measures has made major impact on the improvement of quality of care. All major indicators have improved over the past two decades. However, the indicators for preventive care such as aspirin use for secondary CHD prevention, high blood pressure control, high cholesterol control, smoking cession who receiving counseling lag behind other indicators and remain low. Specific collaborative opportunities or interests: National Center for Chronic Disease Prevention and Health Promotion and Division for Heart Disease and Stroke Prevention can provide technical assistance to and share experience with colleagues in China on CVD prevention and control.

Primary Author Biography

Dr. Hong graduated from Shanghai Medical University. He owned master degree of science from Erasmus University Medical School, the Netherlands and PhD degree at Karolinska Institute in Sweden. In addition, he attended several post-graduate training courses at Nordic School of Public Health, Sweden; Cambridge University, UK; Odense University, Denmark; University of Maryland, Baltimore, US; The Jackson Laboratory, US; University of Colorado at Boulder, US; Rockefeller University, US. Dr. Hong has had faculty appointments at Washington University School of Medicine and Penn State University College of Medicine. Dr. Hong was the Director of Biostatistics and Epidemiology at American Heart Association National Center from August 2001 to January 2009. He is currently with US Centers for Disease Control and Prevention as Associate Director for Science at the Division for Heart Disease and Stroke Prevention. His areas of expertise include medical and public health research and epidemiological studies on heart diseases, stroke, hypertension, obesity, diabetes, the metabolic syndrome, disease surveillance, scientific database management, quality of care and outcomes research, genetic epidemiology, and evidence-based guideline development. Dr. Hong has published nearly 100 papers in medical/scientific journals such as JAMA, Circulation, American Journal of Human Genetics, Stroke, Hypertension and Diabetes Care. He has been an ad-hoc reviewer for about a dozen of medical journals and is a member of the editorial board of American Journal of Cardiology and Journal of American College of Cardiology Cardiovascular Imaging. Dr. Hong is an adjunct professor in epidemiology at Emory University and a fellow of the American Heart Association.
injury prevention, health system and health care insurance. Basic research in clinic medicine, global health, medical education, directed several research projects. Dr. Jin’s research interests include...}

2008 to 2009, Dr. Jin pursued a Master’s degree of public health at Johns Hopkins University, with a concentration in Health Leadership and Management. From Dec 2006 to Jan 2008, Dr. Jin was a research fellow and visiting scholar at the Hospital of the University of Pennsylvania. From 2005...}

Primary Author Biography

Tao Jin is a faculty member from Zhejiang University (ZJU). Dr. Jin graduated from an 8-year MD program in Peking Union Medical College in 2000. Since then, Dr. Jin has worked as a cardiothoracic surgeon in the First Affiliated Hospital of Zhejiang University, one of the largest and most comprehensive research and clinical hospitals in Zhejiang and of the east China area. Up until now, during his faculty membership at ZJU, he has been actively involved in clinic, research and teaching. Dr. Jin was promoted to associate professor in 2005. From Dec 2006 to Jan 2008, Dr. Jin was a research fellow and visiting scholar at the Hospital of the University of Pennsylvania. From 2008 to 2009, Dr. Jin pursued a Master’s degree of public health at Johns Hopkins University, with a concentration in Health Leadership and Management with a Global Health Scholarship. Dr. Jin was authorized two patents by the State Intellectual Property Office of P.R. China and directed several research projects. Dr. Jin’s research interests include basic research in clinic medicine, global health, medical education, injury prevention, health system and health care insurance.

Primary Author Biography

Dr. Dajun Dai is an assistant professor of Geosciences, a core faculty member of the Partnership for Urban Health Research in the Institute of Public Health at Georgia State University, and an affiliated faculty member at Emory Center for Injury Control at Emory University. Dr. Dai specializes in Geographic Information Sciences (GIS). He is interested in the theory of GIS, spatial analysis and modeling on socioeconomic and environmental research, and spatial study of health, crime, urban environment, and transportation issues.

(17) How Chinese Characteristic Underlying Factors Answer the Distribution of Human Resources for Health

Zhang, Lingling; Bossert, Thomas; Liu, Yuanli; Mahal, Ajay

Harvard School of Public Health

Routine access to screening mammography is critical to detect the early malignancies and to reduce breast cancer mortality. This research aims to develop an approach to define areas short of mammography access by integrating both spatial and nonspatial factors in a Geographic Information System (GIS) environment. First, the spatial accessibility is measured on the basis of a Gaussian-based two step floating catchment area method. Second, the nonspatial accessibility is assessed by consolidating a variety of socioeconomic variables collected from Census 2000 into three factors (socioeconomic disadvantages, high social status, and high screening needs) using factor analysis. Finally, spatial access and nonspatial access are integrated into a designation scheme to define areas with poor access to mammography screening services. This approach may help public health professionals designate shortage areas to access mammography facilities, identify the factors responsible for poor access, and develop programs based on available resources.

Primary Author Biography

Objective: To examine Chinese characteristic underlying factors on practice location choice of doctors and nurses, particularly the impact of medical school location, to assist in policy that can help leverage maldistribution of HRH. Background: While China has evolved from a planned economy to a market economy, there remains a legacy of administrative decisions and job assignment by former planning models in the distribution of HRH. Within this characteristically Chinese context, I am interested in exploring whether China will show the same dynamics for HRH distribution today as are prevalent in the international literature which are based on market forces and...
individual choice. One of the analytical frameworks in the international literature suggests that in market economies with individual choice by HRH, medical school location is one of the major determinants of HRH location. Methods: A county-level log-linear analysis was conducted among 2,752 counties in China. The relationship between the distribution of HRH measured by densities of doctors/nurses per 1,000 people and a set of independent variables (demographic, socioeconomic, health infrastructure, local-specific, and medical school factors) was examined. The spatial variable to analyze the effect of medical school location was created. Both tertiary and secondary schools were examined. Results: Results of analysis showed that the distance to medical schools negatively affected the supply of HRH (doctors: beta=-0.054, p<0.05; nurses: beta=-0.068, p<0.05 for nurses). The distribution of HRH also significantly correlated with the size of population aged below 5 years of age and over 65 years of age, gross domestic product per capita, degree of urbanization, medical service capacity, etc. at p<0.05. Conclusion: The results suggest a planning mechanism on geographically locating medical schools in a country. Training locally has been advocated with the shortage of HRH in underserved areas. The significant associations between distribution of HRH and influencing factors provide a reference for policy-makers in planning medical education in need along with effective incentive policies to attract/retain people and in implementing an integrated change. Collaborative interests: To collaborate on examining students’ career choice and location choice, as well as on exploring the reform in medical education.

Primary Author Biography

Lingling Zhang, MPA, is a doctoral candidate of the Department of Global Health and Population at the Harvard School of Public Health. She worked on Rural Community Cooperative Financing based on her field investigation in Shanxi and Shaanxi in 2006-2007. During her two-year practicum with the Massachusetts Department of Public Health, she was an analyst on tobacco control with respect to behavioral risks. Her focus on human resources for health (HRH) started from her research fellow experience at the Global Equity Initiative where she participated in the preparation work for the World Health Report 2006 and the Lancet China series. As a research associate of Harvard China Initiative, she has been involved in China's health system reform advocacy and contributed her work on Community Human Resource for Health in the book Building a Healthy Society for All (2008) led by Professor Liu. Her research interest is in promoting health equity and improving quality of care through health systems’ capacity building especially human resources for health. Her dissertation is devoted to examining the distribution of HRH in China. On the side of research, she is interested in entrepreneurial work. She collaborated with her colleagues on the community-based cardiovascular disease prevention and health education in China. Their work won the first prize in social enterprise track at the Harvard Business School's annual business plan contest. She is also serving on the advisory board of an NGO focusing on bridging the gap of health and education between the US and China.

(18) Establishment of a Mental Health and Psychosocial Support System after a Natural Disaster

Luo, Dan
Department of Social Medicine and Health Management, Public Health School of Central South University

China is a country where natural disasters happen frequently. Except large-scale volcanic eruptions, other natural disasters such as earthquakes, floods, droughts, extreme weather, landslides, forest fires and major communicable diseases occur frequently. The frequency and magnitude of natural disasters have come to impose enormous economic and social constraints on Chinese society. Major natural disasters not only damage, but also ruin our basic production and living facilities. This causes sub-clinical pain, multiple psychological diseases, and health-related behavior changes of the affected people. Providing timely and effective mental health and psychosocial support (MHPSS) to the affected people has become an important mission for the international community and the world. The establishment of post-disaster mental health and psychosocial support systems is a significant step forward for improving public health services, reducing the negative impact of the disaster, and promoting social harmony and stability. In this paper we propose preliminary suggestion for a constructive post-disaster mental health and psychosocial support service system in China based on the current needs of the country. (1) Increase Public Disaster Awareness: The uncertainty and magnitude of natural disasters determines the need for pre-disaster preparations. Universal disaster awareness education can make the public psychologically prepared against possible natural disasters. It can cause the public to learn about common sense precautions and to learn basic methods for responding to natural disasters. This can play an important role in reducing the potential damage that the sudden natural disasters bring and also relieve psychological trauma and stress. Despite the frequent occurrence of natural disasters in China, after almost 70 years of peace, the public does not have a strong awareness or concern about impending disasters. Across the country we have not seen regular and orderly education on how to prevent disasters. Nor have we developed training to improve the way we respond in disasters, especially in disasters which involve large crowds of people. Utilizing the mass media, strengthening disaster preventing courses in school, issuing popular science articles of how to prevent disasters, and enhancing the education and training of public awareness of how to respond during a disaster, should all be classified as important areas of pre-disaster preparation. (2) Establish Mental Health and Psychosocial Support System: A completed and functioning mental health service system is the first step in ensuring the smooth and orderly operation of a post-disaster mental health and psychosocial response system. However, because most natural disasters occur in rural and remote areas of the country, the local communities generally lack a functioning and complete mental health system. In addition, although most provinces now have established an emergency incident disposal expert database, they are not perfect. At all levels of disaster management there is a severe lack of organizational skills. Because administrators, first-line
disasters have involved psychosocial support experts and volunteers. It is an unfortunate fact that even the mechanisms of mobilization for calling all kinds of aid workers in times of disaster are not yet established. We propose to establish and improve the mental health and psychosocial support expert database at the national, provincial and municipal levels, to provide regular professional training to experts in the database (1-2 per year), to train professionals using professional trainers and techniques, and to build the mechanism to mobilize and call experts to serve in the affected areas during a disaster. At the same time, through non-governmental organizations, we expect to establish volunteer service teams and provide appropriate training to them in order to provide timely mental health and psychosocial support services when disasters happen. (3) Develop Psychological Contingency Plan: International experience shows that the contingency plan is of great value for timely, effective and orderly progression of rescuing and rehabilitation work after a natural disaster. Until now, China’s contingency plans for natural disasters are not involved with mental health and psychosocial support. We have not had any national psychological contingency plans related to mental health and psychosocial support for natural disasters. Some local governments have begun to put forward a separate psychological rescue plan, but those local plans lack systematic evaluation. Based on the differing local conditions in China, we suggest to develop psychological contingency plans for a variety of natural disasters as soon as possible. These plans should be integrated with the overall disaster relief contingency plan and making them a major component of the overall plan. At the same time, we should carry out a systematic assessment of the science and operability of the psychological emergency preparedness plan and how it relates to the overall plan. (4) Organize of On-Site Rescue: Organization of the post-disaster rescue venue is a systematic project of significant special significance. Only organized mobilization and deployment can provide timely and effective rescues. Organizing an orderly on-site rescue is absolutely necessary in order to provide general psychosocial support services to affected people. When planning mental health and psychosocial support systems and when formulating prearranged contingency plans, determine the preparation and mobilization needs for the rescue as well as the materiel needed. This will ensure that all relevant personnel from central and local governments and departments will be at their post in the shortest time and carry out the on-site rescue work systematically to avoid chaos. (5) Post-disaster Mental Health and Psycho-social Support Work: The most important issue faced by post disaster mental health and psychosocial support services is accessibility, that is how to make those victims who are in need get professional services with convenient access in a timely manner. Post-disaster mental health and psycho-social support work must always include: (1) providing general psychological support services for all victims, usually via the public media; (2) implementing specific on-site psychosocial support services by having professionals carry out psychological crisis interventions on the injured and their leaders at the scene of the disaster; (3) providing mental health services for patients with severe mental breakdowns that may have come about as a result of the disaster. In addition, we must take into account the long-term consequences of post-disaster mental health and psychosocial support work. We can also provide and/or assist in providing basic mental health services by training community health workers in the disaster areas, or expect the local health community to organize and implement various forms of community mental health services. (6) Assessment of Mental Health and Psychosocial Support Work: After SARS in 2003, major natural disasters have involved psychosocial support experts and volunteers. Unfortunately, these disasters all lack scientific and effective evaluation studies to chronicle the effect of psychosocial support. Experts should be organized to carry out work on this area, and thus to provide a basis and a foundation for a mental health and psychological support system in our country.

Primary Author Biography

Luo, Dan, Ph.D., earned her doctorate in social medicine and health management from Central South University (China) and master degree of clinical psychology from Kagoshima University (Japan). She is now an associate professor of social medicine and health management in the School of Public Health, Central South University. Her research interests include the social epidemiology of health related behaviors, particularly health-risking behaviors of HIV/AIDS, and health care management, particularly mental health care and policy in rural and remote area of China.

Objective: Our multidisciplinary team aims to build a low power wireless microelectronic platform (chip size: 450x500 microns) with sensors, antennas, interconnects, and communication electronics to improve access of care and to achieve continuous monitoring of the health parameters in remote areas, particularly in developing countries. Background: Access of care and the monitoring of chronic diseases (such as glaucoma, diabetes) are often major barriers in the quality of care in many developing countries because the inadequate infrastructure and low number of health care providers to the patient population served (such as in rural areas in China). Wireless technologies (such as cell phones) can bypass the slow process of building heavy infrastructure and is adapted quickly for population in remote areas. Methods: We have designed and prototyped ultra-low power microelectronic circuits that can be assembled into implantable intraocular devices or wearable contact lens. The ultra low power chip requires no batteries and is powered by external wireless devices similar to cell phones and can continuously monitor parameters such as intraocular pressure, or tear film glucose levels. The sampled information can be transferred to tertiary centers on demand or been stored on chip for continuous monitoring for several weeks. Summary: Our prototype device can obtain real time response of intraocular pressure (sample frequency several times per second) and measure reliable levels of tear glucose environment in vitro. The chip can power the sensor using a radiofrequency antennas, and transfer and store data on chip and to an external wireless device. Collaborative opportunities: We seek future collaborative opportunities to further testing of the utilities of such devices in rural areas and we hope to eventually establish production of the microelectronic devices in China for developing countries as an affordable means to improve health care status and the access of care.
Poster Abstracts (Continued)

Primary Author Biography

Tueng T. Shen, MD, PhD is an ophthalmologist as well as an engineer. Dr. Shen is a University of Washington (UW) associate professor of ophthalmology, an adjunct faculty in departments of Global Health and bioengineering. Dr. Shen received her PhD in Medical Engineering at Massachusetts Institute of Technology (1994) followed by her MD from Harvard Medical School (1997). Dr. Shen is building a bridge between engineers and physicians to facilitate the translation of innovative engineering technologies to creative clinical solutions that can be affordable in developing countries. Dr. Shen specializes in anterior segment eye surgeries and she established the first artificial cornea transplant program in the Pacific Northwest of the United States to treat severe corneal blindness. It has become one of the world’s premier centers for the implantation of artificial cornea. Dr. Shen (a native of the People’s Republic of China) taught the first Boston keratoprosthesis surgery in China as an invited faculty for ORBIS international in 2005 and has made frequent trips back to remote China for lectures and training programs. She therefore has particular interest and understanding of the needs for improved access of care. Her research group focuses on the development of the next generation of artificial cornea to treat corneal blindness worldwide. Her close collaboration with the department of Global Health and the college of engineering has already led to the development of a variety of medical devices including polymeric drug delivery systems for the eye and new biomaterials for artificial cornea.

(20) A Balanced Scorecard (BSC)-Based Indicator Framework for Organizational Efficiency and Outcomes: A Pilot Study for Health Facilities in China (Shandong Province and Shanghai)

Shi, Lizheng; Chen, Yingyao; Xu, Lingzhong; Khan, Mahmud

1School of Public Health and Tropical Medicine, Tulane University; 2School of Public Health, Fudan University; 3School of Public Health, Shandong University

Background: Improving the organizational efficiency and outcomes for primary-level healthcare facilities in China has been the priority of China health reforms, particularly after the new wave of China Health Reform in 2009. Objective: This study aims to conduct a pilot test of a BSC-based organizational efficiency and outcomes indicator framework for health facilities in China. Method: A BSC approach used four perspectives: consumer orientation, finances, delivery of high quality care, and ability to learn and grow. A pilot project of a BSC-based tool (a provider survey, a patient exit survey and a facility survey) has been conducted in summer 2010 in two sites. First, Health providers (17 physicians and 15 nurses) completed the provider survey and 121 patients completed the patient survey in the Licheng District General Hospital (LDGH), a Shandong rural district hospital. Second. A total of 25 physicians and 2 nurses completed the provider survey and 100 patients completed the patient survey in the Kangjian Community Health Center (KCHC) of Shanghai. Results: LDGH: In terms of overall consumer orientation, we found very high patient satisfaction (94.5 points) and perceived quality (95 points). Average monthly health utilization included 8,213 outpatient visits, 619 hospital admissions and 128 newborn deliveries. The LDGH achieved 100 points for both equipment availability index and functionality index. However, the facility has very low efficiency (12.9% bed-occupancy rate). Health providers maintained 67 points out of a 100-point satisfaction index and 59% of them received training in the past year. KCHC: It also received very high patient satisfaction (91 points) and quality (93 points). KCHC reported 45,914 outpatient visits and 24 hospital admissions per month with 100% bed-occupancy rate. The KCHC achieved 80 points for both equipment availability index and functionality index. Health providers only reported 52 points of satisfaction scale and 74% of them received training in the past year. Collaborative opportunities or interest: A revised conceptual model and indicators will be proposed for re-testing in order to develop a set of core indicators. The long-term goal for this tool is to monitor and improve health system in China including health workforce development and efficiency improvement.

Primary Author Biography

Lizheng Shi, PhD, MsPharm has trained as a pharmacist (B.S. in pharmacy 1992, M.S. in pharmacy 1994) through Shanghai Medical University and Peking Union Medical College. He has also trained as an economist (M.A. in economics 1998, PhD in pharmaceutical economics and policy 2001) through the University of Southern California. He was a health outcomes scientist with Eli Lilly and Company from 2000 to 2005 and has developed extensive experience in many aspects of health services research in pharmaceuticals and biotechnology products. Specifically, he has been involved in the development and evaluation of comprehensive health outcomes study modules measuring patient-reported outcomes (physical, psychosocial, and cognitive) and health care utilization for clinical trials and national health surveys. He has applied the applied econometric methodology and concepts for measuring quality of care and economical burden. He has been appointed as faculty with the Endowed Regents Professorship in Department of Health Systems Management at School of Public Health and Tropical Medicine since March 2005 and Assistant Professor in Department of Internal Medicine since March 2007. Since March 2005, he has been the Principal Investigators and Co-Principal Investigators for 12 grants and contracts from a variety of funding sources including American Diabetes Association, American Psychiatry Association Foundation, pharmaceutical companies, Veteran Affairs and managed care organizations. Dr. Shi’s current research interest includes health technology assessment (cost of illness, cost-benefit, cost-effectiveness, cost utility) and health care quality, access, and evaluation. He is also interested in health system research in performance and quality.
(21) Measuring Financial Protection in Health for Families with Chronic Conditions in Rural China

Ma, Jingdong
School of Health Management, Tongji Medical College, HUST

As the largest developing country, China has entered into the epidemiological phase characterized by high life expectancy and high morbidity and mortality from chronic diseases. Cardiovascular diseases, chronic obstructive pulmonary diseases, and malignant tumors have become the leading causes of death since the 1990s. Constant payments for maintaining the health status of a family member who has chronic diseases could exhaust the household recourses, reduce commanding over other necessities, and eventually result in poverty. Based on the data of the latest National Health Services Survey in China, we try to shed light on 2 questions: 1) to which degree can the existence of chronic diseases in families make them poor due to the health spending; 2) and can the NCMS protect families with chronic illness members against catastrophic health expenditures effectively? Results showed an extra 10.53% of the families with chronic ill member were impoverished due to paying for health, which are more than two folds of the proportion in the families without chronic ill member. There is a higher catastrophic health expenditure incidence in the families with chronic ill member. After controlling for household size, income, gender of household heads, education level of household heads, family member's self-perceived illness in 14 days, hospitalization episodes in 1 year, and member's clinical visits in 14 days, results of logistic regression shows that simply adding extra benefits has not reduced the financial risks. There is a lack of effective financial protection in health for families with chronic ill member in rural China, even though there is a high coverage rate of New Cooperative Medical Schemes. Given the coming universal coverage of NCMS and the increasing central government fund in risk pool, providing effective financial protection for families should be promised by systematic reform of both financing mechanism and payment methods.

Primary Author Biography

Dr. Jingdong Ma is an associate professor in health management in Tongji Medical College of Huazhong University of Science & Technology (HUST) in China. His research focuses on innovating chronic care and prevention via information technology and organization re-shaping, and chronic care policy as well. Dr. Ma got his medical degree in 1999, and PhD in health policy and management in 2007 in HUST. He worked as a Takemi research fellow in international health at Harvard School of Public Health from 2009 to 2010. Dr. Ma has chaired the Department of Health Information Management in School of Health Management of Tongji Medical College of HUST since September, 2010.

(22) A Framework of Three-tier Low Vision Rehabilitation Services in Shenzhen

Wang, Lin1; Liang, Ping2; Fan, Jiajin3; Xiao, Xingping4

1Johns Hopkins HealthCare; 2Shenzhen University; 3Shenzhen Disabled Persons’ Federation Assistive Technology Resource Center; 4Lions Clubs International District 380

The objective of this project is to develop a comprehensive three-tier low vision rehabilitation (LVR) system in Shenzhen, China. Low vision refers to reduced vision that cannot be corrected with conventional glasses. There are about 5 million low-vision persons in China. The prevalence will increase as the median age of the Chinese population increases. Low vision affects quality of life and increases healthcare burden. However, LVR in China is scant. Barriers to LVR include quality of care, professional training, coverage, LVR awareness in the public as well as in healthcare community. To address those critical issues, we developed a comprehensive LVR model as a demonstration project. The model has three major functions: LVR service, professional training, and public education. The three-tier LVR service network consists of one tertiary center, seven secondary clinics, and 56 primary services. The tertiary center is the nodal point of the network, and has the following components: Visual assessment, visual rehabilitation, care coordination, counseling service, assistive device loan, outcome assessment, professional training, and public education. The secondary clinic provides LVR and care coordination. The primary service conducts visual screening and care coordination. The project will be carried out in two phases over four years. In Phase I, we will establish one tertiary center, one secondary clinic, two primary services, and a vertical and horizontal referral network. In addition, we will develop a training curriculum for LVR professionals, LVR outcome assessment system, a loaner library of low-vision assistive devices, and public education. The rest of the project will be completed in Phase II. This project will be implemented through an international collaboration of healthcare institutions, universities, government agencies, and non-governmental organizations. The principal collaborators include Peking University Shenzhen Hospital, Shenzhen University, Shenzhen Disabled Persons’ Federation Assistive Technology Resource Center, University of California Berkley, Johns Hopkins HealthCare, and Lions Clubs International District 380 Shenzhen China. The project was awarded a 2-year SightFirst grant by Lions Clubs International Foundation. More collaborations are welcome, particularly in areas of providers’ incentive structure and health information technology.

Primary Author Biography

Dr. Lin Wang is a research psychologist by training, with a multidisciplinary background. He received degrees of BE in Computer Science, MS in Experimental Psychology, and PhD in Psychology. In 2005, Dr. Wang joined Johns Hopkins Wilmer Eye Institute to conduct research on low vision rehabilitation, which led him to the field of health services research. Currently, Dr. Wang is a researcher at Johns Hopkins HealthCare, a managed care organization of Johns Hopkins Medicine. His research interests include health care delivery for the Medicaid population, program evaluation, study design, outcome assessment, health information system, and etc. He has published a number of research articles in peer-reviewed journals. Prior to joining...
Johns Hopkins, Dr. Wang worked in the information technology industry at senior technical capacities including software development, database application, internet system administration, web site performance tuning. Dr. Wang is currently serving as the SightFirst Project Liaison of Lions Clubs International District 380 Shenzhen China.

Global literatures have sufficiently demonstrated the bivariate relationship of HIV risks with alcohol abuse and psychosocial distress, little is known about the mediation effect of psychosocial distress on relationship of alcohol abuse with HIV risks, especially among vulnerable populations, such as female sex workers (FSWs). We conducted a cross-sectional survey among 1,022 FSWs who were recruited through community outreach from nine different types of entertainment establishments in China. Participants completed a self-administered survey including measures of their alcohol use behaviors, psychosocial distress as well as their HIV risks. Overall, the HIV risks was positively associated with alcohol abuse (B=0.07, 95%CI=0.03, 0.10) and psychosocial distress problems (B=0.78, 95% CI=0.62, 0.95), respectively. By conducting mediation analysis, we found psychosocial distress mediated the relationship between alcohol abuse and HIV risks. The mediation effect of psychosocial distress suggests that mental health service among FSWs would be an essential component of HIV prevention approaches. Culturally appropriate multi-facet interventions that improving psychosocial wellbeing among FSWs to reduce alcohol abuse problems and related HIV risks among this vulnerable population in China are urgently needed. We are expecting to corporate with people from China in non-government organizations, health providing sectors, research institutes to develop culturally appropriate intervention preventions among this vulnerable population in China.

Primary Author Biography

Xiaoming Li, Ph.D. is professor and director of Pediatric Prevention Research Center at Wayne State University School of Medicine in Detroit, Michigan. He received his doctoral training at University of Minnesota, Minneapolis in areas of educational psychology and research methodology. Dr. Li’s research interests include global health issues related to tobacco smoking, alcohol and other drug use, stigma, mental health, and behavioral prevention intervention of HIV/AIDS. He has been funded by the World AIDS Foundation and NIH to conduct research in China since 2000. His recent work in China includes longitudinal psychosocial needs assessment among children and families affected by HIV/AIDS, culturally appropriate HIV behavioral prevention intervention among rural-to-urban migrant workers, and HIV and alcohol use risk reduction intervention among female sex workers and their clients. He has been also participating in HIV prevention research conducted in other international settings including Namibia, Viet Nam, India, Mexico, and The Bahamas.

(23) Alcohol Abuse, Psychosocial Distress and HIV Risks among Female Sex Workers in China: A Mediation Analysis

Li, Xiaoming1; Zhang, Chen2

1Prevention Research Center, Carman and Ann Adams Department of Pediatrics, Wayne State University School of Medicine; 2Texas A&M Health Science Center, School of Rural Public Health

(24) Contribution of World Bank Loan/DFID Project on Tuberculosis Control in China: An Economic Assessment

Wang, Weibing; Zhao, Qi; Xu, Biaoy; Zhao, Genming

Department of Epidemiology, School of Public Health, Fudan University

Background: Tuberculosis is not only a public health problem but also an important social economic problem. China has the world’s second largest tuberculosis burden. With the implementation of the national tuberculosis programme (NTP), the coverage of the Directly Observed Treatment, Short-course (DOTS) strategy has been increasing, and the detection and cure rates have also improved significantly. Although the achievements, TB control in China is still faced with big challenges. Objectives: The main objective of the research was to determine the economic impacts of World Bank Loan/DFID China TB control project (the Health X Project). Methods: We combined field survey results and national reported data on the TB case management, finance and treatment outcomes. In the field survey, facility survey questionnaires were used to collect the cost data from a total of six counties in Health X Project covered areas. Results: We found that for one more case detected, an average of 2170 Chinese Yuan (CNY) were spent from NTP funds, including 515 from the Health X project, 1123 from national funds, 532 from other funds (e.g., CIDA, Global Funding). A total of 2042 were spent for curing each case, 522 of from the Health X project. During the implementation, the Health X Project contributed 1,644,452 more active cases detected and 82,223 less case death. According to cure rates reported in each year, the Health X Project achieved a 20 billion CNY cost savings. Conclusions: The study concluded that the Health X Project contributed significantly to case detection rate and economic burden from TB of China, and was cost-effective. The problem for the health policy maker is how to sustain an effective NTP inherited from the Health X Project model in the post-Health X Project period.

Primary Author Biography

Weibing Wang was born in a town of Zhejiang Province of China on November 11, 1973. In 1992, he enrolled at the former Shanghai Medical University (now Fudan University) majoring in Health Administration. Soon after, he graduated from the University and worked as a lecturer. However, his academic life did not end there. In 2006, he received his Ph.D. degree of epidemiology, focusing on the health service of tuberculosis. After that, he was involved in several significant studies to learn the equity, accessibility of healthcare service of tuberculosis patients who entered into the health system of China.
Quite a few of papers were published during this period. Those achievements also precipitated the initiation of the program "Independent Evaluation on WB/DFID TB Control Project in China" we present here. In 2008-2009, he received an opportunity to work in Georgetown University, US, as a post-doctor that is an extraordinary opportunity, to offer a cultural perspective in public health prevention and control. During this period, several scientific works were published in several nice journals, e.g., Value in Health, American Journal of Managed Care, based on two health-economy studies on the type 2 diabetes in China. In 2008, he was promoted to associate professor at Fudan University School of Public Health. There is a team he worked with. His current research projects involve policy issues related with tuberculosis or co-infection of HIV and tuberculosis, health service and disease burdens of diabetes.

(25) **Public Health Workforce Development Challenges and Wellness Promotion Program Targeting Public Health Workforce — Lessons Learned from California**

Shen, Joannie

*National Center for Environmental Health, Centers for Disease Control and Prevention*

In recent years, the US Federal Government has reduced its efforts on certain public health workforce initiatives, except for preparedness training. Recruitment, retention, and development of public health workers are left to the state and local levels. California is the most populous state in the nation, serving 13% of the US population. As with other states, California's public health workforce is struggling to address an increasingly complex array of challenges. The state's public health workforce will need to increase by approximately 50%, adding 27,000 new workers by 2020. The statewide University of California system recognized this impending public health workforce crisis; unfortunately, the plan to double the UC system's capacity to develop graduate-level public health workers was recently abandoned as a casualty of the state's budget crisis. This presentation focuses on how a newly established state public health department has been addressing the health risks and wellness promotion for the public health workforce under the constraints of the state budget crisis. Program Step-Up, a pilot worksite wellness-promotion program targeting state public health employees, was conducted with the goal to improve workforce health status through worksite environmental changes, enhanced health awareness, and increased physical activity participation. A program evaluation was conducted to assess whether the program achieved its intended outcomes, determine long term sustainability, and to guide future public health worksite wellness program planning. Findings were identified through collection of primary data from employees including online surveys and in person interviews and analyses of participation in program components. This presentation will discuss the findings and lessons learned from the program evaluation. Compared to tobacco smoking, a common risk factor confronting many local public health workforces in China, evaluation of this program identified obesity as the leading health risk affecting the public health workforce. The usefulness of health risk assessment and worksite wellness promotion program targeting public health workforce will be discussed.

Objectives: Discuss common challenges faced by the US and China local public health departments — their similarity and difference; and identify potential opportunities in partnership building.

(26) **State Initiated Healthcare Reform — Lessons Learned from California**

Shen, Joannie

*National Center for Environmental Health, Centers for Disease Control and Prevention*

California has 12.5% of the US population, approximately 37 million residents. The State often sets the trend in addressing public health issues. Prior to the federal Affordable Care Act of 2010, California’s comprehensive healthcare reform plan intends to reform the State’s healthcare system in order to achieve an accessible, efficient, and affordable health care system that promotes population health through wellness promotion, disease prevention, and universality of coverage. The lessons learned from California and other states might have jumpstarted the national healthcare reform. The essence of the California comprehensive healthcare reform bill, named the Health Care Security and Cost Reduction Act (the Act), incorporates three vital components in an integrated manner and contains innovative measures for all of them: (1) Prevention, health promotion, and wellness; (2) Affordability and cost containment; (3) Healthcare coverage for all Californians. From a disease prevention perspective, the Act structures health benefits to promote prevention, wellness, and healthy lifestyles; creating diabetes, obesity, and smoking cessation initiatives to improve population health. From a health economic perspective, the Act promotes personal responsibility by rewarding healthy choices and targeting chronic disease conditions, such as obesity and diabetes, for long-term cost containment. From the perspective of universality, the Act ensures that health plans, hospitals, employers, individuals, and the government all share the responsibility in achieving healthcare access for all. This presentation focuses on how lessons learned from state-initiated reform could jumpstart national healthcare reform efforts.

Primary Author Biography

CAPT Joannie Shen, M.D., M.P.H., Ph.D. is a medical officer of the US Public Health Service (USPHS). She chairs the Leadership and Strategic Planning subcommittee of the Asian Pacific American Officers Council and is an ex officio member of the Physician Professional Advisory Committee which provides advice and consultation to the Surgeon General on issues relating to the professional practice of the medical category. Prior to her commission, she taught clinical medicine at the UCLA School of Medicine and was appointed as a Goodwill Ambassador by the California State Secretary for public service in Emilia-Romagna representing California. Dr. Shen is currently with the CDC National Asthma Control Program where she provides technical support to state grantees and acts as the Principle Investigator on priority projects with a focus on health care quality improvement. She advises the National Committee for Quality Assurance (NCQA) on healthcare quality performance measures development towards optimal care delivery. CAPT Shen’s tour of duty began at the National Institutes of Health (NIH) where she served as a Senior Clinical Investigator conducting neuroscience clinical trials. She later served with the Food and Drug Administration (USFDA) specialized in high-risk medical devices for pre-market approval and post-market surveillance. Most recently she joined the Centers for Disease Control and Prevention (CDC) worked on California Governor’s Comprehensive State Health Reform initiatives. CAPT Shen holds a M.D. from University of Southern California Keck School of Medicine, masters in public health (MPH) and PhD in Health Services Research from UCLA School of Public Health.
Objectives: Discuss opportunities and challenges faced by the states (in the US) and provinces (in China) in healthcare reform and identify collaborative opportunities.

(27) Problems of China Rural Public Healthcare System and Respective Countermeasures

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Rural public health care system plays an important role in protecting the health of farmers, promoting rural economic and social harmonious development. The living conditions and health status of farmers reflect the developing process of China's modernization. Therefore, Chinese farmers need to have an effective health care security system which has inner relations with economy and social development model. Rural public health is the most important basis for disease prevention, also for ensuring equal health care for different social groups. However, the organization of rural public health care system is not perfect, poor management makes the system unworkable. Especially In the late 1990's, a series of new problems and challenges of rural public health care cause our government great concern. Main problems of China rural public health care system: 1. Incompletion of rural public health care system, loose network of prevention and healthcare at the county, township and village levels. Accelerated reduction of rural health care budget push rural health care network to a general crisis. Reform of rural taxes system is cutting off the normal financial sources of rural health care, most rural government emphasis on stipendiary services, which cause privatization of public health; With declining government health investment and restructuring of township enterprises, subsidization from enterprises now disappear, township hospitals, which are responsible for rural health care are restructuring, makes it unable to carry out many functions, health care network in rural areas is facing serious challenges. 2. Serious shortage of investment in rural public health care, idle resources accompanied with inefficiency. Dating from 80's of the last century, with profound reform of rural social and economic structure, rural health investment decreases gradually. Economic reform and social change in rural health brought a double impact: first, funding becomes the core issue of rural public health; Second, rural public health care system is lacking of function and efficiency. After the tax system reform in 1994, financial resources are controlled by county governments, not township government which is doing the job actually, so financial deficit finally jeopardizes rural public health financial supply. All the above problems lead to poor infrastructure and service capacity of public health agencies in rural areas. According to statistics, the urban population (15% of the total population) are enjoying a 2/3 of health care services, while the rural population(85% of the total population) can only access less than 1/3 of health insurance services. Health resource allocation is extremely uneven between urban and rural areas. 3. Weakening preventive function of public health agencies, emergency stockpile shortage China's health expenditure has two features. One is that we invest more to urban than rural areas. The other is more financial expanding is given to medical care, not to public health care. China Health Economics Institute of Ministry of Health issued a report in 2008 shows that in 2007 medical institutions costs and public health agencies costs were 898.831 billion yuan and 80.347 billion yuan respectively, each accounting for 74.92% and 6.70% of total health expenditure. Costs of City and county hospitals, community health care centers, rural hospitals accounted for 73.74%, 12.47%, 3.22%, 9.97%. In order to maintain their operations, many public health agencies carry out paid services, making the weakening of preventive health care, which leads to reappearance of some long-gone infectious and endemic diseases. Many endemic, epidemic and infectious disease incidence rates increased. Weakened public health system in rural areas not only directly affects the health of farmers, a stark contrast to the speeding-up modernization of our country in the 21st century. 4. Lack of the professional health care technicians, low performance of current health care staff Treatment and care of infectious diseases require experienced clinical specialists and nurses. However, most county-level hospitals only set first level discipline department. The doctors have little knowledge of diagnosis and treatment of infectious diseases. Many medical school graduates do not want to work in rural areas due to low incomes. According to statistics, there are only 1.3 health technicians every one thousand people in rural areas, less than 1/3 of average standard of the whole country. 2/3 health care workers of township hospitals are not graduate from formal medical schools. Because of long-term absent from training, epidemic prevention related professionals forgot disease prevention knowledge, not to say epidemiological common sense. Possible countermeasures for problems of China rural public health care system: 1. Improve rural health management system, establish and improve network of prevention and healthcare at the county, township and village levels. Historically, the establishment and development of the rural health care system are closely related with the rural economic system, social organization. As China's rural economic and social system changes, the organization and basis of the rural public health system have changed, people's communes and the collective economy have been replaced by family individual economy, the rural three-tier health care network has become a shadow, cooperative medical care and barefoot doctors have faded from the historical stage. Now in order to strengthen the rural public health system, a major task is to establish a more perfect organization, the institutional basis for the construction of the rural public health system. 2. Increase government financial investments, improve the financial protection mechanisms of rural public health care. Strengthen government's responsibility, increase financial input in the public health system which is the fundamental guarantee for fixing rural public health care system. However, in reality, the lack of government financial resources at all levels severely restrict the governments’ efficiency. Currently, the township and village government and organizations heavily in debt which becomes a national issue. Many county governments cannot afford grants for township disease prevention. So as to ensure the operation of rural health institutions, to guarantee that farmers can get fair and qualified public health and basic medical services, we must reform and improve the rural health management system and financial support mechanism, establish and complete the standard financial transfer payment system. 3. Integrate rural public health resources, combine disease prevention and treatment. At the national conference on SARS prevention and control, Premier Wen Jiabao has made it clear that our goal of building the public health system is, in three years, to establish and improve an emergency response mechanisms for public health system, disease prevention and control system, health supervision system. This is undoubtedly of great significance to the construction of our public health system. But the problem is that in the vast rural areas, especially in town and village, whether there are necessity and feasibility to build these three systems. If we look into China's public health development
work together to create a new harmonious development of economy and health systems is a priority for us, we must rely on the whole society to promote the urban health system reform. " The Chinese government clearly in his government work report in 2010 that we must focus on the rural public health services. The key element to the development of rural health care is human resource training. Rural health workers should follow health care reform goals and rural residents' demands for health services. Considering the low quality of rural health workers and human resource shortage, there are three things need to be done: One is to strengthen continuing education system. Provide general medical education and training to rural doctors in a variety of ways, encourage qualified rural doctors to attend medical academic education, improve the rural doctors' knowledge and skills. Second is to implement directed education to cultivate qualified personnel for rural areas. Government may delegate special funds targeted to the medical colleges to train general practitioners for rural areas; or medical colleges and local government sign an agreement to hold college classes for rural doctors who must be directly assigned to rural health care institutions after graduation. The third is to encourage working or retired urban health professionals serve in the rural area. Till now, development of public health is beyond the scope of medical science itself, whether its content or extension has taken place vast changes. Therefore, it is particularly important to take a public health as a comprehensive systemic project. Premier Wen Jiabao pointed out clearly in his government work report in 2010 that we must focus on three things: "First, strengthen the public health care system. The second is to improve rural medical and health conditions, make the new rural cooperative medical care system work. The third is to promote the urban health system reform." The Chinese government has given unprecedented attention and support to public health care, which is a golden opportunity for the rural public health care system reform. Rural public health system is the weakest and most vital link among nation public health reform, so strengthening the rural public health systems is a priority for us, we must rely on the whole society to work together to create a new harmonious development of economy and society, city and village, man and nature.

Objective: To design a bundled case rate for Collaborative Care for Depression (CCD) that aligns incentives with evidence-based depression care in primary care. Background: A central element of CCD is a care manager who serves as a physician extender and conducts patient assessment, education, follow-ups, and care coordination, largely outside a patient's visits to his/her primary care physician. Implementation of CCD has been hampered by the lack of payment mechanism. Data Sources: A clinical information system used by all care managers in a randomized controlled trial of CCD for older primary care patients. Study Design: We conducted an empirical investigation of factors accounting for variation in CCD resource use over time and across patients. CCD resource use at the patient-episode and patient-month levels was measured by number of care manager contacts and direct patient contact time and analyzed with count data (Poisson or negative binomial) models. Principal Findings: Episode-level resource use varies substantially with patient's time in the program. Monthly use declines sharply in the first 6 months regardless of treatment response or remission status, but remains stable afterwards. An adjusted episode or monthly case rate design better matches payment with variation in resource use compared to a fixed case rate. Conclusions: Our findings lend support to an episode payment adjusted by number of months receiving CCD and a monthly payment adjusted by the ordinal month. Non-payment tools including program certification and performance evaluation and reward systems are needed to fully align incentives.

(28) Designing Payment for Collaborative Care for Depression in Primary Care

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Primary Author Biography


Professional Affiliations: community health service professional of Jiangxi Provincial Health Department, food safety expert of Juijiang City, deputy director of Health Statistics Committee, Jiangxi Province. Prof. Wang has undertaken and completed 10 research projects at the provincial level, lead one national "11th Five-Year" key project of education planning and one national project of the Humanities and Social Sciences, participated in one National Natural Science Fund Project (2004, rank 4th), issued more than 20 articles, written 5 textbooks (one as chief editor and one as deputy editor), won the third prize of Jiangxi provincial scientific research award (2009, ranking first) and Juijiang Municipal Science and Technology improvement Award (2007, ranking first).
Primary Author Biography

Dr. Yuhua Bao is Assistant Professor in the Division of Health Policy in the Department of Public Health at Weill Cornell Medical College. She is the current recipient of a National Institute of Mental Health Mentored Research Scientist Career Development Award. Her research interests include studying the payment and performance evaluation policies to provide incentives for evidence-based depression care in medical settings. She also conducts studies to understand mechanisms underlying racial/ethnic and socioeconomic disparities in health care, and to identify policies to eliminate such gaps. Dr. Bao maintains interests in methodological issues in health services research including modeling service utilization and costs, making causal inferences based on observational data, and decision analytical methods to assess stakeholder preferences in health care. One of her studies published in the journal HSR received the John M. Eisenberg Article of the Year Award for excellent original research in health care policy in 2007. Dr. Bao received her B.A. from Fudan University in Shanghai, China, and her Ph.D. from the RAND Graduate School in Santa Monica, California.

(29) Determine Drug Exposure Status of Patients in Electronic Medical Records

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Introduction: Medication errors have serious impacts on hospital safety and quality. Much of these errors are due to confusion about patients’ medication regimen, which is fueled by multiple handoffs among care providers. Electronic Medical Records (EMRs) provide valuable resources for medication reconciliation (MR) and clinical research. However, medications in EMRs usually exist as heterogeneous data types including both structured (e.g., e-prescribing systems) and unstructured (e.g. clinical notes) formats. The detailed drug information is embedded in narratives, which is not immediately available for analysis. The patient drug exposure information is critical for both MR and drug-related clinical research such as pharmacogenomics. Here, we introduce a framework combining Natural Language Processing (NLP) and Machine Learning (ML) to predict patient drug exposure status from time-sequenced drug mentions in EMRs. Method: The framework consists of two steps: 1) label drug mentions with status: 'start', 'stop', 'hold', 'dosage change', 'complication', 'transition', and 'other'; 2) predict if a patient is ON/OFF a drug using status and temporal information associated with the mentions. Phase I was implemented as a sentence classification task with contextual features using Support Vector Machine (SVM). Phase II was also implemented using SVM, but with status and temporal information as features and investigated two temporality-related issues: 1) time window; 2) temporal representation (e.g. "weekly" or "monthly"). Results: As a pilot study, we applied the framework to 107 admissions from 61 patients for warfarin exposure prediction. All available EMRs around each admission were collected and 6,046 sentences containing warfarin/coumadin keyword were extracted and manually assigned a status. In phase I, a 10-fold cross-validation was performed and mean accuracy achieved was 92.8%. In phase II, the ‘monthly’ representation with 90-day time window performed the best with 81% precision and 83% recall. Conclusion: Here, we proposed a framework of temporal-based drug exposure mining from EMR for both MR and clinical research. For future work, we look forward to collaborative opportunities with medical, NLP and ML experts.

Primary Author Biography

Dr. Mei Liu received her Ph.D from the University of Kansas in computer science with research focus in bioinformatics. She is currently an NLM funded postdoctoral fellow in the Department of Biomedical Informatics at Vanderbilt University. Her research interest include data mining, natural language processing, bioinformatics, clinical informatics, pharmacovigilance, and pharmacogenomics.

(30) Achieving Universal Access to Essential Public Health Services in China: Recent Plans, Actions and Achievements

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Background: Inequality in health between rich and poor, rural and urban in China was well documented. Chinese government officially promulgated its health care reform plan in 2009, setting the goals and the framework for health system reform. In this national health reform plan, increasing access to essential public health services was one of most important priorities of moving toward universal health coverage. A series of policies have been designed and implemented for over one year including a national essential public health service package for the whole residents as well as special policies for maternal and child in poor areas. Objective: To introduce and evaluate the relevant policies and the preliminary results and discuss the potential problems and strategies. Methods: 1. Literature review and documentary analysis; 2. Collecting statistical data from Ministry of health reported by local health bureaus in 31 provinces; 3. Undertaking questionnaire survey for 37 chief executives of local municipalities; 4. Undertaking semi-structured and in-depth interview with public health providers, officials and experts. Results: 1. Better equity for essential public health services providing. All provinces (31) in China mainland required to provide the national essential public service package in 2009 covering nine basic public health programs, namely health education, immunization, infectious disease control, maternal and child health care, regular health checkup for the elderly, chronic disease management, management of patients with severe mental illnesses. A capitation financing schemes was developed to guarantee the equal access to this package. 2. Better equity for access to public health facilities. Central government supported the construction of 986 county-level hospitals, 3,549 township hospitals,
and 1,154 urban community health service centers nationwide to ensure all population access health facilities within 20 minutes by walk. 3. Better equity for financial support and responsible system. Central government provided per capita 15 Yuan (2.2us$) spending on essential public health services for the whole population. Local government is responsible for over-head expenditures in township and community health centers. 4. Narrowing the gap of disparities in different areas and groups. In 2009, China started the program for checkup of some diseases among women aged 35-59 years in rural areas, and complete screening of 1.6 million people for cervical cancer and 430,000 people for breast cancer. Local governments subsidized the provision of folic acid supplements and hospital delivery for about 12 million rural women and also initiated immunization with the hepatitis B vaccine for about 28.78 million people below the age of 15, accounting for about 38% of the target population. Discussion: Though the significant progress of universal access to essential public health services have been achieved in China, there are still some potential challenges and problems. 1. An unsustainable financing would be difficult to secure for lacking of regarding laws; 2. The gap of capacity between different areas would lead to disparities of service quality. It might result in inequity of health outcome in the future; 3. At present a number of prosperous areas are considering extending more items of essential public health service, as a result of tremendous differences in local governmental financing, unpredictable inequities in public health service providing might emerge; 4. Weak monitoring and evaluation. Both providers and purchasers should be considered in evaluating public health service performance. However, the current output is limited to providers; it is lack of valid data and appropriate methods support for evaluating health outcomes of public financing.

Primary Author Biography

Wei Xiao, Assistant Research Fellow, Department of Health Policy, Institute of Medical Information, Chinese Academy of Medical Science (CAMS)/ Peking Union Medical College (PUMC). She was born in 1979, received master degree from School of public health, Peking University. Mainly engages in health policy research and health reform related work in the Department of Policy and Regulation of the Ministry of Health of PRC. As main participant, she takes part in some health policy research programs such as Study of Monitoring and Evaluation of Deepening the Reform in Pharmaceutical and Health System;Study of Tracking Evaluation for NRCMS Pilot policy of rural child catastrophic diseases et al. Main Composing and publishing: Research on main policies and the trends of WHO at different stages; Health systems and health reform policies in five central Asia countries; Attitudes to the progress and related issues of health care reform; Survey for chief executives of some prefecture level cities; Difficult Problems in five priorities of advancing the health care reform et al.

(31) Urban-Rural Difference of Breastfeeding in Georgia

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Objective: To compare breastfeeding initiation, duration and exclusiveness between mothers living in urban and rural area in Georgia. Background: Increasing breastfeeding initiation, duration and exclusiveness is a goal of Healthy People 2010. These rates in Georgia lagged behind national level. Methods: We used data from the 2004-2008 Pregnancy Risk Assessment Monitoring System (PRAMS) in Georgia. Breast feeding initiation was determined by the question “Did you ever breastfeed or pump breast milk to feed your new baby after delivery?” Breastfeeding duration was grouped into never, 2month or less and more than 2 month. For a woman to be exclusive breastfeeding at 8 weeks, she must have breastfed the baby for more than 8 weeks, and the age of baby first time fed anything except breast milk must be more than 8 weeks. SUDAAN was used to account for the complex sampling design. Results: The prevalence of breastfeeding initiation in Georgia was 74.6% for mothers living in urban vs. 58.2% for those living in rural (p <0.001), and the prevalence of breastfeeding babies more than 2 month was 50.8% vs. 34.1%, respectively (p <0.001). However, among mothers breastfeeding more than two months, mothers reported breastfeeding their infants exclusively for at least two months was 51.2% for urban and 63.0% for rural (p = 0.001). In multivariate logistic regression, mothers living in urban area were more likely to initiate breast feeding (AOR =1.74, 95% C.I. =1.41-2.15), and breast feed their babies more than two month (AOR =1.45, 95% C.I. =1.17-1.79) than those living in rural area. Mothers in urban were less likely to exclusive breastfeeding through two months than their counterparts in rural (AOR =0.67, 95% C.I. =0.48-0.94). Conclusion: There existed region difference of breastfeeding pattern in Georgia. Programs promoting breastfeeding should consider this difference. Collaborative opportunity: Rural mothers are less likely to initiate and continue breastfeeding in US while exclusive breastfeeding were positively related to mothers living in rural areas in China. Comparing breastfeeding pattern and associated factors between China and United State may provide an example to understand the impact of culture, society, family, healthcare and economy on public health practices.

Primary Author Biography

Yan Li received her MD degree in Internal Medicine in 1992 and MS degree in Ophthalmology in 1995 from Tianjin University of Traditional Medicine. She came to United States in 2002 and obtained a MPH degree in Epidemiology from Emory University at Atlanta in 2006. She joined CDC as a contractor in 2007 in the Branch of Behavior Risk Factor Surveillance System, in the Division of Community Health, NCCDPHP. She works as project coordinator / Epidemiologist in Pregnancy Risk Assessment Monitoring System, in the Maternal and Child Health program in Georgia Department of Community Health from 2010 to present.

(32) Medical Insurance for Internal Migrants in China

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Why did migrants have low public medical insurance coverage? Economic difficulty is one reason and the hukou barrier is another. Local policies such as Shanghai city, Chengdu city, and Shenzhen city, are being piloted in various cities to meet this challenge. Eventually, there are tow ways, integration of medical insurance and medical insurance transition, to address the problems. As the most populous country in the world, China has experienced unprecedented material improvements during the past 30 years. But China is still in the midst of a great structural transformation involving a process of industrialization and urbanization, alongside transitions in fertility (from a young to an
aging society) and health. Like many other developing countries, China has been experiencing dramatic demographic and epidemiological transitions. With a population that is becoming urbanized and elderly, China’s major health threats are chronic diseases, now accounting for more than three-quarters of all deaths in China. Who is bearing the costs of these social and economic transitions? One group that epitomizes these transitions are migrants — those who move from rural to urban areas, from agriculture to industry, from areas of higher to lower fertility, and from worse to better health systems. Based on the statistics from the National Statistics Bureau, the amount of migrant population has increased from below 2 million before ‘reform and open-up’ to 230 million in 2009, in which peasant workers flowing to cities account for 180 million, nearly 80% of the whole migrant population. Due to the barriers of the household registration system (hukou), migrants are largely excluded from urban public services, including access to basic health services (Hu and Cook et al., 2008). Generally, medical services utilization by migrant is lower than local citizens. Based on the 3rd national health services survey, the two-week doctor visit rate was 5.45%, and the annual admission rate was 1.51% for migrants in Guangzhou (Ling Li etc., 2005); the two-week doctor visit rate was 4.43%, and the annual admission rate was 1.18% for migrants in Beijing, all lower than that for local citizens. Currently the difference between health services demand/utilization and provision among migrants is huge. Economic difficulty is one of the most important reasons. Migrants have low income and low public medical insurance coverage. They generally do not choose the exited health services. Why did migrants have low public medical insurance coverage? For the national level of medical insurance, there are three basic medical insurance scheme: New Rural Cooperative Scheme, Urban Employee Basic Insurance, and Urban Residents Basic Insurance. In December of 1998, the State Council announced a major decision to establish a social insurance program for urban workers. This new system will replace the existing labor insurance schemes (LIS) and government insurance schemes (GIS) in the cities. The program aims to provide a basic benefit package to all urban workers, including employees of both public and private enterprises. (Liu, 2002). In October 2002, China announced a new funding strategy for a newly established Community-Based Health Insurance named New Rural Cooperative Medical System (NRCMS). The government would encourage farmers to participate in the NRCMS by providing each participant with an annual subsidy of 10–20 Yuan(Liu, 2003). At present, the premiums granted by government have increased to 120 Yuan. Prior to 2007, the third population cohort, some 420 million urban residents without formal employment, was completely left out of the state health care safety net. Following the guidelines outlined in State Council Policy Document 2007 No. 20, a large-scale pilot of URBMI was initially launched in seventy-nine cities. In his State Report to the 2008 People’s Congress, Chinese Premier Wen Jiabao reiterated the policy’s goals: to implement a pilot model in 50% of cities nationwide by the end of 2008, and to ultimately extend insurance coverage to 100% of cities by 2010. Under direction of the State Council, the three programs of UEBMI, URBMI, and NCMS will eventually serve as a universal safety net in helping finance health care for all of China(Lin et al., 2009). However, Migrant challenges the basic medical insurance system in China. For the national level of medical insurance, we have basic medical insurance system for urban workers, The New Rural Cooperative Medical System for farmers and medical insurance system for urban citizens. Theoretically, these three systems could cover all citizens in China. However, migrant population has brought tremendous challenge to the medical insurance system in China. National policy has long been established on locality-based schemes that depend on household registration (hukou), which is not easily transferable from rural to urban areas. During the process of marketization, urbanization and industrialization, migrants flowed to south east coast for employment, which generate these small plan units. Migrants, therefore, do not qualify for public medical insurance and assistance programmes, and have to pay out-of-pocket expenses for medical services in cities. City governments are faced with the dilemma of not wanting to overburden public finances by extending medical cover to migrants versus the need to provide some services to prevent potential public-health crises. Although we do not have a national system for migrant workers’ participation in medical insurance, the Labor Laws required all formally employed migrant workers should be grouped into the basic social insurance plan, including pension insurance, medical insurance, unemployment insurance, occupational injury insurance and birth insurance(Wang Dewen, 2008:209). On May 16, 2008, the Department of Labor and Social Insurance issued ‘Announcement on Deployment of Migrant Workers’ Participation In Specialized Medical Insurance’, it mentioned that by the end of 2008, we should group migrant workers who had labor relationship with urban employers, into medical insurance, with the purpose of solving major disease medical insurance. Based on the principle of ‘low cost, major disease insurance, insurance during employment and employers pay most of the cost’, we should formulate and improve medical insurance for migrant workers, explore the way to combine medical insurance of migrant workers and The New Rural Cooperative Medical System, and perform management and services of migrant workers’ participation in medical insurance. Local medical insurance system for migrants: Local policies are being piloted in various cities to meet this challenge. There are three types of medical insurance system for migrant workers. The first one is ‘comprehensive mode’ characterized by Chengdu and Shanghai, It is uniquely designed for migrants, including industrial injury, impatient treatment, senior allowance. the second one is characterized by Guangdong and Beijing. It groups migrants into the current medical insurance which is for urban workers. There are differences between migrant workers and urban workers in terms of cost and treatment level, the third one is ‘migrant workers cooperative medical insurance’, which is mainly carried out in Shenzhen. Comprehensive insurance mode(Chengdu City): On March 1, 2003, Chengdu issued ‘Temporary Methods of Comprehensive Medical Insurance for Non-urban Residency Workers in Chengdu’, and became the second city following Shanghai, to carry out comprehensive medical insurance. The 2005 issued ‘Temporary Methods of Residence Permit Management in Chengdu’ required that the permit should be obtained before participating in the comprehensive medical insurance. By March 2006, there were totally 250,000 people were engaged in this insurance, accounting for 20.8%. Extended medical insurance mode (Beijing). In 2004, Beijing issued ‘Temporary Methods of Migrant Workers’ Participation in the Extended Medical Insurance in Beijing’, which grouped migrant workers into the social insurance system for urban workers. They can receive senior pension, industrial injury insurance and medical insurance. In July 2005, the Department of Labor and Social Insurance of Beijing Issued ‘Announcement of Expediting Migrant Workers’ Participation in Industrial Injury and Medical Insurance’, to facilitate this process. Migrant partnership medical insurance (Shenzhen): On Feb 23,2005, Shenzhen issued ‘Methods of Migrant Partnership Medical Insurance Testing Spot in Shenzhen’, and later carried out this new type of medical insurance. It is on a voluntary basis in terms
of choosing impatient medical insurance or cooperative medical insurance. This medical insurance system targets all workers of agricultural residency. The monthly payment is 12 Yuan (employers pay 8 Yuan and migrant workers pay 4 Yuan). The services include outpatient, impatient chronic kidney failure and dialysis treatment. The payment is based on different level of medicines and hospitals. The highest amount is 60,000 RMB. Migrant workers are eligible for this insurance after initial participation. Overall, each area set up its own medical insurance system for migrant workers based on its own specific features, but there is lack of connection among different areas, which makes the medical insurance system appear to be scattered. This scattered situation does not match the high mobility of migrant workers and cause tremendous inconvenience to migrant workers after the move from one area to another. Moreover, the insurance system for migrant workers is only responsible for major diseases and coverage during employment period. However, a majority of migrant workers are in their young adulthood, they generally are in relatively good health condition. As a result, they might use more outpatient services than impatient services. So the medical insurance systems in many areas fail to finely cope with the medical needs of migrant workers.

Approaches to fully cover migrants: There exits three different health insurance patterns: (1) Universal Health Insurance Mode. Typical country of this pattern is England. Main fund resources come from allocation of the government. All citizens and legal migrants can enjoy free medical service. (2) Social Medical Insurance Mode. Typical country of this mode is Germany. Obligatory social insurance fund is the main financing channel. The fund will be directly paid to the medical institutes to serve for the patients. (3) Commercial Medical Insurance Mode. Typical country of this pattern is America. This kind of private insurance pattern is not obligatory and it is similar to common product. Universal Health Insurance Mode provides medical insurance based on residence identification rather than citizenship. IF China has adopted the NHS pattern, there is no internal migrant medical insurance problem. But the health insurance arrangement in China is based on local finance, social insurance and personal expenses. Residency is the main criteria to separate migrant populations and urban citizens, and it defines which government is responsible for a certain citizen’s health insurance in a specific area. Judged from medical financing, it makes this mode not suited for China. Based on China’s own experience, we should adopt the Social Medical Insurance Mode characterized by Germany. Under the Social Medical Insurance Mode, there are two approaches to cover the migrants. How to improve the medical insurance coverage rate for migrant so as to realize universal coverage to all citizens? The first mode is the integration of medical insurance. After realizing universal coverage within the framework of medical insurance system, the main efforts to be made will be to integrate public medical insurances and social medical salvation, and integrate urban medical insurance system and rural medical insurance system. This process should carries out based on phases and regions. In addition, the equality of medical insurance is the key factor during this process. China needs to create cooperative medical insurance system to propel the integration process nationwide. Of course, it is preferable to realize the integration in small regions first in order to gain experience, such as the efforts that have been made in Pearl River Delta Region and Shanghai Pudong, before we could reach extension to the whole country. The second mode is medical insurance transition. Currently, problems of the medical insurance system for major diseases among migrants prevail, such as imprecise insurance subject, short insurance period, low insurance level and barriers in insurance relationship transition. These drawbacks bring tremendous difficulties to the portability of medical insurance for migrants. Although there are disparities among the three existing insurance systems in terms of fund raising, reimbursement ratio etc., the country could still provide with subsidy based on the identification of the participants, and let the participants choose their own preferable type of medical insurance, in order to establish the mechanism for the transition between different medical insurance systems and finally improve the medical insurance coverage rate for migrants. In January 2010, the ‘Methods of medical insurance relationship transition for migrant population’ was carried out, which required the implementation of this policy throughout the whole country.

**Primary Author Biography**

Shaolong Wu, lecturer of health policy and health management, school of public health, Sun Yat-sen University, PRC. Dr. Wu is also a researcher of Sun Yat-sen Center for Migrant Health Policy, which is sponsored by CMB. His research interest focus on: (1) health insurance of internal migrants in China; (2) health financing and management; (3) health resources distribution and health equity; (4) performance budgeting. As coauthor and coordinator, Dr. Wu is engaging in a joint project which is implemented by United Nations Research Institute for Social Development and Sun Yat-sen Center for Migrant Health Policy. His research also was funded by NFSC. Education: 1997, B.S., public administration, Lanzhou University, Lanzhou, China; 1992, MPhil., public administration, Lanzhou University, Lanzhou, China; 2003, Ph.D., public administration (public budgeting and financial management), Sun Yat-sen University, Guangzhou, China.

(33)  **Comparative Analysis of Health Systems of China and India**

Zhao, Yingnan; Shi, Lizheng; Khan, Mahmud

School of Public Health and Tropical Medicine, Tulane University

**Background:** China and India have much in common, in terms of large populations and rapidly developing economics since 1950s. Objective: To perform a comparative health system analysis between China and India. Methods: Literature and reports from the governments, World Bank and World Health Organization (WHO) were critically reviewed to compare the key health indicators and their contributing factors. From cross-country analysis, a regression function was used to estimate how health expenditure per capita (in PPP dollars) is different for different levels of GDP per capita (in PPP dollars) and proportion of urban population. Results: Over the past 60 years, both China and India have achieved substantial improvements in health. Life expectancy at birth increased from 46.6(1960) to 73.1(2008) in China and 42.4(1960) to 63.7(2008) in India. Other health indicators have been improved including reduced infant mortality rate and fewer deaths from infectious diseases. More medical personnel have been trained; more medical services have been provided. However, health care has gained less focus than their economic development after economic reforms. Unequal health care resources allocated, burden of medical cost on patients and poor performance of health care delivery system become more important issues faced by China and India. Differently, China may be lack of competition in medical care market, which is dominated by public providers; while state power seems to be weak in India. Also, population expands more quickly in India; China has more elders. Health expenditures of both India and China are below the expected levels. The results of regression model suggests that the expected health expenditure of China should be about 36.6% higher than the current level and expected health expenditure of
India should be 42.5% higher. Collaborative opportunities or interest: Compared to India, more successes have been achieved in China. Health reform is implemented in China with great perspective. China collects only 10.3% of its GDP as net revenue, indicating its fiscal space can be significantly increased to achieve “universal coverage”. Change in financial burden and satisfaction with health system/insurance in China is important to study. A greater role of private healthcare delivery system can be further explored.

Primary Author Biography

Yingnan Zhao is a 4th-year PhD student in health system management at the TUSPHTM. She earned his MS in HSM from University of Macau. She will help the PI’s (Dr. Shi and Dr. Khan) to analyze the information. She will also participated in all deliverables (draft report, final report, etc).

(34) China’s Aging Problem — Imperative to Construct Long-Term Care System

Yang, Xiaoshi

China Medical University

Driven by the waves of population aging, global elderly persons increase dramatically, and were raised widely concern by the international societies. In 1999, China became the aging society which owns the largest elderly population, accounting for about one-fifth of the whole world elderly population. Currently, the number of elderly population is increasing by 3% per year. From 2005 to 2020, China’s elderly population will have a considerable increase of 100 million and the aging process will continuously accelerate. By the year 2050, it is estimated that 400 million elderly people aged 60 and older, will account for 25% of the total population. The process of population aging is also accompanied with the senior citizens of the elderly. The number of elderly persons with the age of more than 80 years shows a rising trend, increasing by the rate of 5%, but the elderly persons’ health status are not optimistic, whose prevalence of chronic diseases, limited mobility rate and disability rate are all far higher than the whole population. In China, the elderly has a high risk of chronic diseases.

Once the disability occurs, the high cost of care is overwhelming for many elderly people, which may result in great financial and caregiving burden on the family. The characteristic of China’s aging population is at a fast speed as “old before getting rich”, which was described as “running into aging”. However, the elderly health services fall far behind. The use of medical care services mainly manifests as the contradiction status of high-need and low-demand. China’s population aging process is relatively advanced of modernization of economic society whose pension capacity is very limited and whose infrastructure and related services cannot keep up with the growing care needs of older persons. Advances in healthcare and nutrition, combined with the one child policy, have led to small size of family, the increase of empty-nest families or elderly people living alone and the rising of elderly dependency ratio correspondingly. The result is a population bulge called the “4-2-1” phenomenon, in which one child is supporting two parents and four grandparents. Care insurance has been emphasized by many researchers since there is currently no insurance for long term care. The demands for and utilization of the health service is higher in the elderly compared with the younger citizens implying the number of people who pay for the service will reduce. “China’s Aging Population Development Trends Report” issued by National Committee in 2006 submitted to deal with the dual pressures of the aging of our population and excessive total population, posed two specific measures which bring challenges for economic and social development and also speed up the construction of elderly social security system and to develop aging health service industry. It is a serious problem that our government is facing to deal with long-term care when the social and economic circumstances are not yet developed. Implementation and the establishment of nursing care and social insurance system will become a major social problem that we must face in the near future. In developed countries, long-term care service system is an important institutional arrangement of health services, while our country’s long-term care career falls behind because of relatively deficiency of health care and rehabilitative care resources. At present, China has no safeguard policies related to long-term care and nursing care insurance system. While in Europe and the United States, Japan, Taiwan and Hong Kong, there is the corresponding care insurance and its burden of care was borne by the social security system. As a result, the burden of care of patients and their families could be attenuated. Since long-term care has not been established in China, registered nurses and caregivers are in short supply, therefore it is family members especially the patient’s spouse, children, parents or close relatives that usually have to take the responsibility of both caring for patients and older people. Chinese caregivers usually have more heavily family burden as a result of filial duty which is a part of Chinese culture, with their own health status being underestimated. Due to the higher expense on the medical fees of the cancer treatment and imperfect of health insurance in the vital chronic diseases, elderly person’s family could not afford medical expenses of the illness treatment, and the family financial status also went severely constraint as their owing to medical bills. Sometimes caregivers had to stop working in order to give full-time care to the patient. Hence, most of their families suffered a loss of income and make sacrifices because of large hospital expenses. For many families, loss of income led to “the medical poverty trap” as expenses on treatment. There is no formal services on alleviation of caregiving burden in the community and home care level. We should develop community health care services and advocate self-care of the elderly themselves. The liability of taking care of the elderly should be shared by individuals, families, organizations and the government. But the government has a social and historical responsibility to play the leading role. Perhaps the government’s greatest challenge is the developing nature of the national economy and the building of more old age homes. To build social security and service systems for senior citizens, the government should first try to find out what exactly old people and their families need. There are about 38,000 care homes for the elderly, including 2.4 million beds, which means only about 15 beds are available for every 1,000 senior citizens in China compared with 50 to 70 in Western countries. The tragedy is that 20 percent of the available beds in China lie vacant because of the economic and other problems that aged people in the country face. In the macro background of the aging population, a popular practice across the globe is shifting the focus from family support to building professional centers for senior citizens. Such centers require the government to provide financial support and a strict monitoring to ensure quality service. The government has three...
roles to play. Its first role should be as a designer and provider of pension services, the second as promoter of socialization, standardization, and professionalization of the services for senior citizens, and the third as constructor and supervisor of the services - taking care of the system to deal with the differences between urban and rural areas, and different age groups of the elderly people. Since China has to deal with an aging population without having the advantage of a developed economy, its care system and services for the elderly may stay at a relatively low level for a while. Thus, the government needs to explore the establishment of the long-term care service system, long-term care insurance and strike a balance among equity, quality and efficiency. Long-term care can be provided at home, in the community, in assisted living or in nursing homes. Long-term care system which takes the long-term care insurance as the core of this system, community health services as the main foundation, service standards and norms as the criterion, supported by family members, social workers and volunteers actively involved in, has become the last security network of the individual human life and also the last defense line of entire society security system. The key is the community-based home care model, including community service (community setting), small-size service institutions in the community, mainly day care centers (adult day care center) and the elderly, family services, as well as home care (home-based setting) which is providing the elderly services in their families. From the perspective of the elderly, community long-term care services make it possible that older persons can receive services in their own homes to avoid the trouble to adapt to new environment. From the Government's point of view, this form can improve efficiency, and compared with the institution-based services, the community members are usually participate in the community health services, which can save a lot of money for both the family and government. On the contrary, professional home care workers in the United States (caregiver) are generally trained health care workers, including registered nurses, qualified practice nurses. The government should establish appropriate supervision and administration institutions, make overall plans and direct the development of long-term care services, establish long-term care social insurance, carry out long-term care business insurance under the government support, and encourage to set up social service agencies to provide professional and regular long-term care services for the disabled elderly. Meanwhile we should explore "the new model of community-based home care"vigorously which means the policies of "community care plus home care", and actively build pension and health care services system with Chinese characteristics and meet the needs of different models or different levels of the elderly persons. In summary, Long-term care system should be established in response to this great change of the aging problem. This study has important implications to provide evidence for the Chinese government to establish long term care insurance policies for the elderly and terminally ill patients.

Primary Author Biography

Lecture: Department of Social Medicine, School of Public Health, China Medical University. Research: Yang, Xiaoshi's work focuses on Long-term care system and chronic disease control, with a particular focus on caregiver burden and depressive symptoms among caregivers for the elderly and chronically ill patients. Her work includes conducting studies to look at how caregiver burden as well as positive psychosocial resources like optimism and social support are related to to health outcomes and quality of life; and provide evidence for the establishment of long-term care systems. Other research includes: Studying the relationships between occupational stress and quality of life in Chinese teachers; how interactions between stress and work environment may influence health; Research on risk factors of occupational stress and PTSD in seaman; Establishment and standardization of the scale of Chinese edition-Zarit caregiver burden interview; Research on influence factors of rural health services centres' efficiency in Liaoning province; Study on health status and community demands of the aged population in Shenyang; Community-based health promotion among elderly type-2 diabetes patients in urban and rural areas. Education: Master, 2010, Epidemiology and Statistics, China Medical University; Bachelor, 2004, Preventive Medicine, China Medical University.

(35) An Analysis of Social and Medical Determinants Affecting Readmission: Indicators for Measuring and Improving Quality of Care

Wang, Feng

Boston University School of Medicine, Boston Medical Center

Objective: Discuss how institutional rules and regulations can influence readmission, describe how experiences with readmissions from Inpatient Rehabilitation Facilities (IRF) are influenced by medical determinants, and explain the social determinants such as culture and race increase risk for readmissions from IRFs. We try to understand how to examine and define the knowledge base of staff on the acute service for admission to an accredited rehab unit. Background: Readmission after hospital discharge in US, Canada and Europe uses as an indicator of the quality and efficiency of hospital-level care for several clinical conditions. Unplanned readmission in US cost Medicare $17.4 billions in 2004 alone. In 2009 the Centers for Medicare and Medicaid Services of US publicly reported hospital-level risk-standardized 30-day readmission rates for certain conditions to help health care consumers making their care decisions and to drive quality improvement nationally. There is not much data available on readmission from IRFs. This study of readmission will focus from IRF angles. Methods: Using Uniform Data System (UDSMR) available rehabilitation facility data of impairment groups, demographics and readmission rate comparing our own facility with region and nation to identify predictor, risk factors and socioeconomic factors. Results: The readmission rate is higher with special impairment groups, stroke, traumatic brain injury, trauma and spinal cord injury, associated with high medical complexity and co-morbidities. The readmission rate is also associated with demographic factors such as minority ethnicity and lower socioeconomic status. The other variables include gender and first admissions.

Primary Author Biography

Feng Wang, MD, MPH, is an Assistant Professor and an attending physician at the Department of Rehabilitation Medicine, Boston University School of Medicine and Boston Medical Center. She has been serving as the Medical Director for the Center of Rehabilitation at the Boston Medical Center. Dr. Wang integrated clinical practice, research, and administration. As the medical director, she led the Center to obtain two three-year CARF accreditations consecutively. One of Dr. Wang’s recent research projects involves cost effect of readmission and indicators for measuring and enhancing quality care. She has authored many national and international journal papers.
Motivating Doctors in Improving Patient Safety: a Comparative Case Study of Hong Kong and Mainland China’s Teaching Hospitals

Zhang, Jianglin; Chung, Vincent; Griffiths, Sian
Xiangya Hospital, Central South University

Objective: To identify facilitators and barriers in motivating doctors for improving patient safety at selected teaching hospitals in Hong Kong and Mainland. Methods: Face to face, in-depth interviews with 20 managers of Quality and Risk Departments in Hong Kong and Mainland. Results: Analysis of the data generated 11 themes and they are clustered under 5 main constructs. i) Views on current patient safety culture: Hong Kong has successfully created a learning, just and safety culture. But name, blame and shame culture is still dominated in Mainland. ii) Patient safety education: Hong Kong has introduced patient safety into undergraduate curriculum and organized CME on patient safety regularly to staff. However, there was no similar data in Mainland. iii) Teamwork training and staff engagement: In Hong Kong, teamwork training, staff engagement and learning are important strategies to ensure patient safety. But most of teaching hospitals in Mainland pay little attention on these strategies. iv) Incentive structures: Hong Kong's doctors are usually motivated by professionalism and 'Pay for Performance' is on going. However, most of teaching hospitals relied heavily on the financial penalty in Mainland. v) Information management and technology: IT development has been a major initiative of teaching hospitals in Hong Kong. But Mainland did not implement IT systems collaboratively. Conclusion: Hospital administrative style, doctors' payment structure, and Risk and Quality Department manager's competency play important roles in motivating doctors to enhance patient safety. Hong Kong fares better in motivating doctors for improving patient safety than Mainland at teaching hospitals.

The Relationship of Medical Injury Severity and Malpractice Claims in China

Zhang, Yusheng; Huang, Jesse
1Wellpoint, Inc.; 2Peking Union Medical College

Context International studies showed a significant mismatch between medical injury and malpractice claims, yet the relationship of them hasn't been reported in China. Objectives: To estimate the risk of malpractice claims by presence and severity of medical injuries. Study Design case control study Setting Two Obstetric & Gynecological hospitals, Beijing, China, from Jan. 2004 to Dec. 2007. Methods: 44 malpractice claims happened from 2004 to 2007 have been identified and matched with 98 controlled non-claimants on the basis of patients' age, diagnosis and procedures received. Demographic and medical data were collected from patients' case records. Two senior consultant Ob/Gyn doctors were hired to decide the presence and severity of medical injury based on patients' records. Odds ratio for association between medical malpractice claims and presence and severity of medical injuries was estimated using conditional logistic regression. Results: We found that patients suffered from severe medical injury (odds ratio (OR), 27; 95% confidence interval(CI), 1.01-719) were significantly more likely to file malpractice claims, after controlling for age, diagnosis and procedures received. Mild (OR, 14.7; 95% CI, 0.30-725) and moderate injuries resulted in increased odds of claims, although not at the level of statistical significance. Patients' ethnicity, employment status, insurance statuses and hospitalization spending are not significantly related to malpractice claims. Conclusions: Ob/Gyn Patients suffered from severe medical injury are significantly more likely to sue for malpractice. In order to tackle the pressing malpractice issue, the Chinese medical community should try to prevent medical injury, especially severe ones.
Effectiveness Analysis of Strategies on Improving Maternal Mortality in China

Zhou, Huan
West China School of Public Health, Sichuan University

Improving maternal health is the fifth goal of Millennium Development Goals (MDG 5) of the United Nations, which were officially established at the Millennium Summit in 2000. The one of the targets for assessing progress in improving maternal health is reducing the maternal mortality ratio (MMR) by three quarters between 1990 and 2015. This paper aims to analyze effectiveness of a series of strategies on improving maternal mortality from 1950s to present in China and make the further policy suggestion on reducing MMR to achieve the MDG 5 in China. During the early years of the People’s Republic of China, most of puerperas died due to puerperal infection and postpartum hemorrhage caused by traditional delivery method and poor health care condition. In order to reduce maternal mortality and protect maternal health, modern delivery method was advocated by Chinese government since 1950s. However, modern delivery method was not universalized in some rural areas although maternal delivery was improved in some cities at that time. Since 1960s, a series of strategies, including training rural midwives, and building maternal and child hospitals in rural areas as well as setting up maternal care system, were launched by Chinese government. Consequently, the national maternal mortality was dramatically dropped from 1,500/100,000 in 1950s to 500/100,000 in 1960s. Starting from 1980, unified management of mother and baby were carried out. Meanwhile, networks of mother and child health have been established in urban and rural areas and maternal mortality was systematically registered. Government, health managers and medical technicians successfully worked together and tried to make medical care and prevention as well as health services be available for pregnant women. Consequently, such policies were implemented effectively, and national MMR was decreased to 100/100,000 in 1980s. Although reducing maternal mortality is a core work of maternal and child health, a series of effective strategies could not be implemented constantly and spread out due to lack of policy strong supporting. National MMR was maintained at 95/100,000 till to 1990. In 2000, a program to reduce maternal mortality and eliminate tetanus in infants was conducted in 1000 counties in middle and west regions supported by Chinese government. In this program, the comprehensive strategy on promoting maternal delivery in hospitals included: 1) Change the duty of house midwife to prenatal care, postnatal interview and delivery escort, which is consistent with international recommendation; 2) Impoverished rescue and price-limited delivery in hospitals make more poor prenatal women be able to delivery in hospitals; 3) Strengthen knowledge and willing/attitude of delivery in hospitals in rural population by health education. Such strategies showed satisfying effectiveness, represented by maternal mortality in target counties rapid falling from 76.0/100,000 in 2001 to 48.8/100,000 in 2006. Thus, improving maternal delivery in hospitals has been advocated as one of important and effective strategies in reducing maternal mortality in China. The Fourth National Health Services Survey in 2008 showed that the nationwide average rate of maternal delivery in hospitals was 88.6%. Compared with rates in 1993 (38.7%) and 1998 (50.4%), rate of maternal delivery in hospitals dramatically increased. Furthermore, national MMR was decreased to 34.2/100,000. In the western rural areas, however, there are still a large number of regions in which rate of maternal delivery in hospitals was less than 50% and MMR was above 40/100,000, especially in minority regions. Meanwhile, some researches showed that education level, household income, inconvenience, unnecessary and cost of delivery in hospital in pregnant women, and conception of village doctor, referral ability of village hospital as well as distance between village and town were the important and significant factors affecting maternal delivery in hospitals in rural areas. To accelerate progress towards the MDG 5 in China, i.e. MMR<25/100,000 by 2015, the further effective strategy is necessary to be considered. According to the previous strategies and their effectiveness during the different period as well as the existed problem and challenge, some suggestions for further policy are as following: 1) Put the maternal and child health into the priority of national public health and western rural areas are the key regions of intervention. 2) From supplier side, add government investment into maternal health and improve quality and access of maternal health care, in terms of capacity of obstetricians, related equipment in county hospitals, and cost for maternal delivery in hospital as well as referral of village hospitals. 3) From need side, strengthen conception of maternal care and promote maternal delivery in hospitals through evidence-based health education and social mobilization in rural areas, in particular western minority areas.

Table 1 — Strategies and their effectiveness on improving maternal mortality during different period in China

<table>
<thead>
<tr>
<th>Period</th>
<th>Strategies</th>
<th>MMR/(100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950−</td>
<td>Advocating modern delivery method</td>
<td>1,500</td>
</tr>
<tr>
<td>1960−</td>
<td>Training rural midwives, building maternal hospitals in rural areas, and making maternal care system</td>
<td>500–100</td>
</tr>
<tr>
<td>1980−</td>
<td>Unified management of mother and baby, establishing health networks of mother and child in urban and rural areas, registering maternal mortality</td>
<td>&gt;100</td>
</tr>
<tr>
<td>1990−</td>
<td>Popularizing maternal delivery in hospitals</td>
<td>95</td>
</tr>
<tr>
<td>2000−08</td>
<td>Strengthening government support, comprehensive strategies on maternal delivery in hospitals</td>
<td>95–34</td>
</tr>
<tr>
<td>~2015</td>
<td>Suggestion: Priority intervention in western rural areas, add the investment of maternal health and improve quality and access of maternal health service, health education and social mobilization in rural areas</td>
<td>Expected: &lt;25</td>
</tr>
</tbody>
</table>
Primary Author Biography

Huan Zhou, PhD, Associate professor of West China School of Public Health, Sichuan University, China. MPH on Health Management was received in Shandong Medical University, and PhD on International Health was received in the University of Tokyo. The main research fields are health policy in terms of policy evaluation, health human resource, epidemiology in tropical diseases, health and social behavior in particular HIV/AIDS prevention and control, tobacco control, reproductive health, and child growth. Member of the Alliance for Health Policy and System Research, reviewer of American Journal of Human Biology and reviewer of Journal of Epidemiology and Community Health. Outstanding thesis award of foreign students in the University of Tokyo, outstanding young faculty award in Sichuan University and outstanding youth funding in Sichuan University have been honored. More than 10 projects focused on children health, reproductive health and related health policy as well as health human resource have been done. Meanwhile, more than 30 papers have been published in international and Chinese journals.


Zhang, Bin1; Xu, Roman2

1China Health Policy and Management Society; 2China Medical Board

Objective: The objective of this literature review is to assess the published cost effectiveness literature regarding population in China mainland, with a focus on the recent trend in research interest and methodology. Background: Health technology assessment, especially cost effectiveness analysis of medical interventions, have been published worldwide, and gradually accepted as part of comparative effectiveness evidence for health policy. Given the large population and limited health care resources in China, there would be of great need for using cost effectiveness evidence in healthcare resource allocation decision-making. Methods: A systemic literature review was conducted to identify original cost effectiveness studies focusing on population in China mainland that were published in MEDLINE-indexed, English or Chinese-language journals from 2005 to the most recent. Trend in research interest and methodology of each article was assessed. Results: 17 original cost effectiveness studies were identified. The majority of these identified studies (11/17) were led by researchers from medical or public health institutions in China. However, only 2 studies were published in Chinese language. The research interests of these studies covered a broad range of disease area (the top three areas were hepatitis, cancer, and diabetes). The commonly assessed medical interventions included pharmaceutical therapy, immunization, and screening. There is a clear trend in methodology that decision analytic models were frequently used in these cost effectiveness studies (76%). The effectiveness measures varied: 59% of authors used quality adjusted life year or life year; and 41% used clinical effectiveness measures. Conclusions: Cost effectiveness analyses focusing on population in China mainland have been widely published in medical journal, with a trend of using decision analytic models. More cost effectiveness studies published in Chinese language would help improve transparency and accelerate adoption of cost effectiveness evidence in healthcare policy decisions in China.

Primary Author Biography

Bin Zhang, MD, MSc, is an experienced clinical and health economic researcher who has over 12 years of experience in designing and conducting clinical, epidemiological, and health economics research across a range of disease areas including diabetes, cancer, cardiovascular disease, infectious diseases, spinal disorders, bleeding disorders, etc. His research interests include health economic modeling, economic analysis in clinical trials, epidemiological research, and large-scale database analysis. He obtained a MD from China Medical University, and a Master of Science Degree in health policy and management from Harvard School of Public Health. He completed his completed his residency in internal medicine and fellowship in endocrinology (specializing in diabetes care) in Peking Union Medical College Hospital.
times in public clinics increased 53% after adjusting time trend. The reduced outpatient cost in public clinics had not only induced health service demand, but also attracted many patients who were used to seeking treatment at private clinics or county hospitals. However, the income of doctors had decreased 15% after health reform scheme. The respondents attributed it to local government’s reluctance to subsidize all their losses. The scheme although discouraged doctors to prescribe expensive or unnecessary medicine, however, it also resulted in reduced incentives for doctors to provide health services. Increasing local government’s subsidy willingness and improving performance based salary is the key to encourage doctors to provide more health services.

Objective: Generic market competition reduces drug prices and increases access to pharmaceuticals after expiration of patents and market exclusivity periods. This study assessed the characteristics of generic approvals and the time from originator drug approval to first generic entry for drugs approved by the FDA in the period 1980-2009. Data & Methods: The study included all new molecular entities (NMEs) approved by the FDA in the study period. Differences between group means and proportions were assessed using t-test and chi-square test, respectively. Significant level was set at 0.05. Results: The FDA approved 739 NMEs during the study period. After excluding drugs discontinued, the analysis included 625 marketed NMEs. The FDA approved at least one abbreviated new drug application (ANDA) for 39.4% of marketed NMEs. There were ANDA approvals for 3 discontinued drugs. There were 175 Paragraph IV patent certifications (required for ANDAs for originator products with unexpired patents listed in the FDA Orange Book-OB) for the NMEs approved after the Hatch-Waxman Act (1984). Paragraph IV certifications were filed for 50.0% of the 180 ANDAs for NMEs approved after the Hatch-Waxman Act implementation. The patent and market exclusivity of 28.5% of the NMEs with generic competition had not expired at the moment of ANDA approval. There were 130 NMEs without patents and market exclusivity listed in the OB that did not have ANDA approval. Orphan drugs had a higher percentage of NMEs without patent and market exclusivity and without ANDA approvals (61.5%) than non-orphan drugs (40.8%) (p<0.01). Time from NDA approval to generic entry was on average 11.9±4.2 years (n=249), and varied by therapeutic class from 9.4±3.4 years for musculo-skeletal ANDAs (n=17) to 16.5±4.1 for dermatological ANDAs (n=12) (p<0.001). The top classes by number of ANDA approvals were cardiovascular (n=54, 11.4±3.5 yrs), nervous system (n=50, 10.2±3.2 yrs) and antiinfectives (n=30, 14.0±4.3 yrs). Conclusions: A large percentage of ANDA approvals had Paragraph IV certifications for patents listed in the OB that were not valid or enforceable. Orphan drugs had less generic competition than drugs for larger patient populations. "NOTE: Preliminary results from this study were presented at the American Public Health Association (APHA) 2010 meeting."

Objective: This study is to compare different smoking interventions’ effectiveness in reducing smoking prevalence in a county population. Background: The Milwaukee County of Wisconsin has one of the highest smoking prevalence (24% of adult population) in the state. At a time when budget constraints make it difficult to enhance every possible smoking intervention, it is important to understand the comparative effectiveness of different smoking interventions under the demographic context of the Milwaukee County. Method: We use UCLA Health Forecasting Tool, a well validated population microsimulation model to forecast different smoking interventions’ long-term impact on smoking prevalence. We use census data to simulate individual life courses in the Milwaukee County and construct four scenarios for future health trends: 1. the main smoking cessation intervention (i.e., Quitline, which is part of the national tobacco control program) remains at the current coverage level of reaching 2% of active smokers; 2. Quitline starts to reach 4% of the smokers since 2011; 3. a hypothetical intervention reduces the hazard of smoking initiation by 50% among people aged 17-25 since 2011; 4. a combination of the 2nd and the 3rd scenario is achieved, i.e., since 2011 the county experiences both a smoking initiation hazard reduction of 50% and a doubling of Quitline reach. We are interested in comparing the smoking prevalence from these scenarios. Results: For Scenario 1, 2, 3 and 4, the smoking prevalence in 2020 are 18.2%, 17.6%, 15.5%, 15.0%, respectively. In 2030, the smoking prevalence are 16.4%, 15.5%, 12.2% and 11.5% for Scenario 1, 2, 3 and 4. Conclusion: Halving smoking initiation among young people achieves lower smoking prevalence than doubling the reach of the smoking cessation program of Quitline. Maintaining and enhancing smoking prevention programs among young people should be of a priority in the county’s health policy planning. Collaborative opportunities or interests: This health forecasting method has been used to examine the long-term impacts of various health interventions.
We look for collaboration on projects involving forecasting population health trends in China and the US.

**Primary Author Biography**

Lu Shi is currently developing the microsimulation model for health forecasting and designing the dissemination strategy. His research focuses on prevention and early detection of chronic diseases. His other research interests include comparing different approaches to health care reform and improving health communication among disadvantaged populations. He received his Ph.D. in Public Policy Analysis from the F.S. Pardee RAND Graduate School, where he worked on several projects with the RAND Corporation's Health Division.

**Challenges and Strategies for the Healthcare System with Ageing Population in Shanghai**

**Li, Guohong**

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Following the global trend of population aging, China became an aging society at the end of the 20th century. The ever-growing medical demands of the elderly and the late development of aged care services make the present situation of health care for elderly in China worrying. As the first city which enters the aged society in China, Shanghai now confronts a situation where the proportion of the population aged 65+ is growing. Longer average life expectancy, a higher elderly dependency ratio, and the higher health needs of the elderly all serve to compound this problem. In response to this situation, the Shanghai municipal government has actively adjusted its development strategies and has been improving the capacity of aged care, but some problems still remain. Using information on health status and the capacity to provide health care for an aging population on the basis of health need and demand evaluation, this presentation calculates the gap between hospital bed availability and the need for hospital beds for the elderly by sub-district in Shanghai. Suggestions for closing this gap include establishing a new health and aged care system for the elderly, modifying health insurance policy to give more incentives to use for community health centers, design a separate health insurance system for elderly, and establish a dynamic evaluation system for elderly nurses.

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Dr. Guohong Li is an associate professor at school of public health, Shanghai Jiaotong University. A health economist, her work focused on measurement and national application of health systems performance assessment, hospital quality and elderly healthcare. She earned degree from Fudan University - PhD in Health Economics. The title of her dissertation was “The evaluation of hospital performance in Shanghai”. She developed a set of indicators to assess the hospital performance. After that, she was a postdoc at Center for Health Policy, Stanford University. The title of the project she did was “Feasibility study for establishing the multi-tier elderly healthcare system in Shanghai”. She also was a research fellow at Harvard University Initiative for Global Health (HIGH) from July 2006 to Sep. 2008. During that period, she focused her work on National Health Accounts which is trying to initiate a new method in helping developing national strategies for effective health financing. She had deeply explored the health data from WHO, IMF, OECD and UN. When she had involved in the project of Fairness Financial of Contribution, which analyzed catastrophic health spending using World health Survey in 70 countries, she modified the methods and produced new knowledge about catastrophic health spending in different countries.

**Placing China’s Health Professional Education in a Global Picture**

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After one-year intensive research and discussion, the Commission on Education of Health Professionals for the 21st Century published the final report “Health professionals for a new century: transforming education to strengthen health systems in an interdependent world” on Lancet in November, 2011. As part of the overall research, a web-based survey was conducted to assess the current instructional and institutional situations in education institutions of medicine, nursing, midwifery, and public health. The web-based survey questionnaire contained both qualitative and quantitative inquiries of medical, nursing, and public health schools about governance, financing, educational programs, curriculum design, IT use, and global exposure and activities. Invitations were announced in a Lancet commentary with responses of a questionnaire arranged through Surveygizmo service linked through the Commission website. To broaden participation, we also sought Commissioners and others to promote eligible institutions to participate in the web-based survey. Within three months we received 25 responses from Chinese institutions through the network of China Medical Board among a total of 165 responses from 27 countries. The survey results showed that most responded Chinese schools are still confined to science-based education model with traditional and stagnant curricula, teaching and evaluation methods. Some are moving into problem-based learning model and explored in implementing new evaluation methods. None has incorporated system-based model, meaning health professional education should be competency-driven with a local focus in a global context. Innovations like team-based learning, interprofessional learning, the use of information technology, which emphasize on preparing students the important skills for future real work environment rather than memorizing knowledge and were observed in responses from developed countries, have not been reported in the responses. Contents on topics like health policy, health management are less covered among Chinese schools comparing to respondents from other countries. Most funding and collaboration opportunities Chinese schools received were mostly on research rather than education. Chinese schools should move into more advanced education models to prepare their graduates for the changing practice environment and they can benefit from learning international experiences in health professional education reform.
during pregnancy and infancy reduced BMI. Famine exposure was associated with a nearly three-fold increase in the odds of hypertension for the 1958 cohort and late pregnancy and 0-2.5 y for the 1959 cohort. BMI decreased by 0.3 BMI units in the 1960-61 cohorts, exposed from 1.5 - 4.5 y, but decreased by 0.3 BMI units in the 1960-61 cohorts, exposed during pregnancy and infancy. Famine exposure was associated with a nearly three-fold increase in the odds of hypertension for the 1958 cohort; a similar but non-significant estimate was found for the 1957 cohort. In general, postnatal exposure during the first 2-3 years of life and early age at quitting.

### Developmental Origins of Health: Evidence from the Chinese 1959-61 Famine

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The nationwide Chinese famine of 1959-61 was the largest in human history. We used data on 35,025 women born in 1957-1963 to assess impact of famine exposure on height, BMI and hypertension. The data are from the China-US Collaborative Project for Neural Tube Defect Prevention; the women averaged 31.7 old at time of measurement. The famine varied in intensity across provinces and counties and affected rural areas disproportionately. We used a measure of famine intensity at county level based on the size of birth year cohorts in a difference-in-difference model which compared each cohort to the unexposed 1963 cohort, after correcting for age differences, and estimated impact for the average level of intensity across counties. Impact was confined to rural areas but this could be due to small sample sizes in urban areas. Height was reduced in the 1958-59 cohorts by 1.7 and 1.3 cm, respectively. This corresponds to exposures during 0.5- 3.5 y for the 1958 cohort and late pregnancy and 0-2.5 y for the 1959 cohort. BMI increased by 0.92 BMI units in the 1957 cohort, exposed from 1.5 - 4.5 y, but decreased by 0.3 BMI units in the 1960-61 cohorts, exposed during pregnancy and infancy. Famine exposure was associated with a nearly three-fold increase in the odds of hypertension for the 1958 cohort; a similar but non-significant estimate was found for the 1957 cohort. In general, postnatal exposure during the first 2-3 years of life reduced height and increased BMI and hypertension whereas exposure during pregnancy and infancy reduced BMI.

### Cigarette Smoking Cessation, All-cause and Cause-specific Mortality: A 22-year Follow-up Study in US Physicians

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Context: Smoking is a leading cause of death; however, few studies described the pattern of reversal of risk of all-cause and cause-specific mortality in men upon smoking cessation. Objective: To assess the relationship of cigarette smoking, time since quitting and age at quitting with all-cause and cause-specific mortality in US male physicians. Design, Setting, and Participants: 19,724 US male physicians enrolled in the Physicians' Health Study in 1982 with detailed smoking information collected in 1988 and follow-up through 2010 for mortality status. Main Outcome Measures: Hazard ratios (HRs) of all-cause and cause-specific death. Results: The mortality rates were 11.5, 16.6, and 26.0 per 1,000 person-years for never, past and current smokers. Cigarette smoking is associated with increased risk of all-cause mortality (HR, 2.62; 95% confidence interval [CI], 2.40-2.87 for current smokers, and HR, 1.22; 95% CI 1.16-1.30 for past smokers). Compared with current smokers, the risk was significantly reduced within 10 years of quitting (HR, 0.60; 95% CI 0.54-0.68) and, after more than 10 years of quitting, the risk was further reduced (HR, 0.48; 95% CI 0.43-0.54) to the level of never smokers (HR, 0.45; 95% CI 0.40-0.50). For cause-specific mortalities, the risks were quickly reduced to the level of never smokers within 10 years of smoking cessation for cerebrovascular disease, sudden death and colorectal cancer; within 20 years of cessation for coronary heart disease, pulmonary disease and lung cancer; and after 30 years of quitting for prostate cancer. Quitting smoking even after age 60 year old significantly reduced all-cause mortality by 39% but only quitting before 50 years of age could completely eliminate the elevated risk due to smoking. Conclusions: In US middle-aged male physicians, cigarette smoking contributed to major causes of death; excess mortality was significantly reduced after quitting, and benefits accrued with increasing duration of abstinence and early age at quitting.
Primary Author Biography

As an epidemiologist studying biomarker and genetic marker in chronic diseases, my major research interests are: 1) hormonal energetic biomarkers such as insulin-like growth factor (IGF-I) and binding proteins, C-peptide (a marker of insulin production), adiponectin, leptin, and related genetic variants in cancer risk and progression; 2) nutritional biomarkers and related genes in their metabolic pathways including B-vitamins (folate, vitamins B12 and B6), fatty acids, vitamin Ds, antioxidants (selenium, vitamin E, and lycopene), and iron status and oxidation stress (smoking and obesity). My special interests are in translational research linking basic science to epidemiological research to clinical applications. Our recent research findings support the notion that "certain intrinsic host environment (i.e., overweight/obese, hyperinsulinemia, hyper de novo lipogenesis, inflammation, or genetic predisposition) may favor aggressive neoplastic behavior, whereas certain nutrients (fish, long-chain n-3 PUFAs, vitamin D, or antioxidants) could modify or counteract these adverse effects." This concept may aid in refining cancer risk prediction (especially for fatal outcomes), and be relevant to develop novel and individualized cancer therapeutic and prevention strategies. Our researches are mainly supported by grants from NIH, US Department of Defense (DOD), the Prostate Cancer Foundation, and National Cancer Institute of Canada. I am an active participant in the NCI Breast and Prostate Cancer Cohort Consortium (BPC3), a multi-collaborative research project involving the resources of nine large prospective cohorts from the US and Europe and the NCI-Cancer Genetic Markers of Susceptibility (CGEMS) genome-wide association study (GWAS). In addition, I also serve on the NIH and DOD grant review special panels.
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Collaboration Interests: Health care reform, economic development in China, rural-urban divide

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Collaboration Interests: Pharmacovigillance, pharmacogenomics, biomedical natural language processing

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Collaboration Interests: Health system and policy, especially on health financing and health human resources

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Area of Expertise: Chinese local governance and grassroots democracy, elections, US history and politics  
Collaboration Interests: Rural public health, integrated delivery system, incentive structure

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Area of Expertise: Health economics, pharmaceutical safety  
Collaboration Interests: Quality of care, health care financing, health insurance reform and drug regulation reform

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Collaboration Interests: Healthcare management and policy, IT new technology application in healthcare

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Collaboration Interests: Health system reforms, public health strengthening

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Area of Expertise: Emergency response, public health, philanthropy  
Collaboration Interests: Role of philanthropy in promoting high quality, effective, efficient high value health and healthcare

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Area of Expertise: Social medicine and health management  
Collaboration Interests: Establishment of a mental health and psychosocial support system after a natural disaster

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Collaboration Interests: Essential medicines

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Collaboration Interests: Chronic disease research and prevention in China

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Area of Expertise: Chronic care policy and E-health  
Collaboration Interests: Improving chronic care outcome via health information technology

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Area of Expertise: Antibacterial resistance and its relationship to antimicrobial use, especially in healthcare settings, efficient diagnosis of new antibacterial resistance

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Collaboration Interests: Information technology, electronic medical records

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Area of Expertise: Health economics and policy
Collaboration Interests: Studies on health systems research

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Collaboration Interests: Research regarding how health care services are organized in rural areas, how health professionals are recruited to rural areas, and how the system is financed

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Area of Expertise: Pricing of healthcare service, consumer behavior in the healthcare market, personalized medicine/preventive care, health insurance contract design, physician incentive
Collaboration Interests: Design and comparison of physician incentive and health insurance contracts in both the US and China, understanding consumer behavior in the US and China healthcare market and the difference between them after controlling the different institutional setting, pharmaceutical pricing and hospital management in China and the US

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Collaboration Interests: Comparison of healthcare reform measures in China and the US

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Collaboration Interests: Mental health projects and suicide projects

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Collaboration Interests: Disease surveillance system, spatial analysis, data exchange

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Collaboration Interests: Health policy and health management, such as health service delivery integration, access to care, quality of care, hospital administration, and chronic disease management (not limited these aspects); opportunities for study and communication at an overseas university and establishing a good relationship between my university and the overseas university

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Collaboration Interests: Research collaboration

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Collaboration Interests: State health reform, quality improvement, health and environment air quality, workforce development

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Area of Expertise: Global eye care to improve quality of life and disease burden, especially in developing countries  
Collaboration Interests: Partnership with Chinese organizations to develop and implement high tech and low cost devices to improve the current access to care from remote regions and to reduce the cost of care for routine treatment in ophthalmology; our main technological interests include: wireless microelectronics and affordable drug delivery systems for ophthalmology as well as other continuous monitoring approaches

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Area of Expertise: Family medicine, primary medical care, medical education, family medicine education and faculty development, healthcare management, healthcare management education, evidence-based medicine, preventive medicine, chronic disease management, patient centered medical  
Collaboration Interests: Family medicine/primary medical care, developing medical education programs for family physicians/primary care physicians, developing efficient and effective systems for delivering primary medical care, consulting/teaching healthcare management

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Area of Expertise: Epidemiology of cardiovascular disease
Collaboration Interests: Research collaborations on the epidemiology and prevention of cardiovascular disease

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W
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Collaboration Interests: Collaboration with Zhejiang University for resident educations and trainings and collaboration with hospitals on research projects such as quality of care improvement

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Collaboration Interests: Investigate medical costs of various chronic diseases including hypertension, and cardiovascular diseases

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Area of Expertise: Health system research in increasing accessibility for vulnerable population, economic evaluation of infectious disease, and expanding health insurance for migrant workers.
Collaboration Interests: Interested in the area of expanding health insurance coverage for the vulnerable population, i.e., migrant workers and in a comparative study of economic evaluation of the infectious disease, say, HBV, or of chronic disease

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Collaboration Interests: Health service delivery

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Collaboration Interests: Access to healthcare for TB, diabetes, equity in access to healthcare (migrants, the rural poor)

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Collaboration Interests: Research on sexual health targeting men who have sex with men in China — a group of sexual minority with the highest prevalence in HIV and syphilis, respectively. More than a third of these men are married and have sexual relationships with both genders outside their marriage. Presently, the health care efforts (particularly prevention and early intervention) targeting these men are less than optimal. Working with Dr. Xiang-Sheng Chen, Vice-director, of the China’s National Center for STD Control I have begun to explore a more integrated approach to address HIV and other sexually transmitted infections

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Area of Expertise: Medical anthropology, developmental epidemiology, reproductive health, transcultural psychiatry  
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Collaboration Interests: Set up a cooperation with Emory University on health policy research

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Collaboration Interests: Collaboration with Chinese organization (especially in Hangzhou and Shanghai) on computational analysis of medical or biological data

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Collaboration Interests: HIT opportunities in China

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Collaboration Interests: Developing international program in clinical geriatrics, such as geriatrics center, nursing home program in China, as well as developing a geriatrics educational program in China

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Collaboration Interests: Hospital performance evaluation and indicators, payment methods

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Area of Expertise: Healthcare administration; interests: new regulations, access to health care, population affected, economy impact  
Collaboration Interests: Lessons learned from both counties during the health care reform, which areas the two countries could benefit from each other to achieve their ultimate goals

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Collaboration Interests: Networking with health economic researchers in China

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Collaboration Interests: Establish a collaboration with people in HIV/AIDS and tobacco control areas
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Area of Expertise: Nutritional epidemiology and policy intervention  
Collaboration Interests: Based on assessment of behavioral risk factors, we are planning to build various policy scenarios and generate policy recommendations for aggressive policy intervention, as parts of the comprehensive health care reform, to foster a healthy culture; we are looking for groups or individuals focusing on how to wisely spend limited resource (delivery of preventive service) rather than to passively pay (or subsidize) the medical bills from the government perspective.

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Collaboration Interests: Improving healthcare quality and performance.

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Collaboration Interests: Human resources for health, community health, elderly care, health innovation, quality of care.

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Area of Expertise: Global health, infectious diseases (viral hepatitis), host genetic susceptibility  
Collaboration Interests: Seeking for collaboration in projects/program in viral hepatitis prevention or research.

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Area of Expertise: Economic evaluation, chronic diseases  
Collaboration Interests: Chronic disease management in China, diabetes in particular.

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Collaboration Interests: Obesity.

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Collaboration Interests: Quality of care improvement and performance measurement.

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Collaboration Interests: Policy comprehensive evaluation

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Area of Expertise: Coordinate colleagues in healthcare field  
Collaboration Interests: Representing Fudan University, to facilitate the international collaboration on the research in health policy and systems and their application

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Area of Expertise: Health policy implementation, comparative health care systems, translation of research into practice, health care quality improvement, health economic evaluation, clinical decision making, clinical outcome analysis  
Collaboration Interests: To get updated about the latest research in healthcare reform in both countries and look for potential research partners
Westlake Forum III — Healthcare Reform in China and the US: Similarities, Differences and Challenges

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(Proceedings received as of March 28, 2011)

Schreiner, Rob, *Integrated Delivery Systems: Kaiser Permanente in Georgia* ................................................................. 66
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Integrated Delivery Systems: Kaiser Permanente in Georgia

April 11, 2011

Integrating Care — Kaiser Permanente

Teams
MD | RN | PNP, MA | Pharm,
Engineers | Paid
To Think
Quality
Process
Systems
 kp Medical
Center
 kp HealthConnect

Communication
Huddle
Protected time
MD–MD

Effective Care Measures w/ Market Leading Performance

Results — Best Quality

KPGA Leads Market

# of HEDIS 2010

1st in Georgia 2005-2010

Breast Cancer Screening

2005

100th Percentile

2010

50th Percentile

Integrated Care is The Tool to get better ...

Integrated Care — in general

Team-based Care

Geographic Aggregation of Services

The Discourse of Communication

How MDs are Paid
(not FFS)

Process Improvement

A REAL EMR

Results — 20% lower cost (at least)

Average medical expense PHN by ICT type (excluding prescriptions)

FY2008

$304

In-patient

$363

Outpatient

$375

Extranets

Members with PHG's
Members with external PCs

KPGA Leads Market

# of HEDIS 2010

Effectiveness of Care Measures w/ Market Leading Performance
Healthcare Reform in China: Improving Access to Care

Meng Qingyue  
China Center for Health Development Studies  
Peking University  
Westlake Forum III  
Atlanta, April 10-12, 2011

Access

Five “A”s: Availability; Accessibility; Accommodation; Affordability; Acceptability

Dimensions:
- Physical access
- Financial access
- Linguistic access
- Information access
- Service availability/allocation
- Non-discriminatory service provision (equitable treatment regardless of age, gender, race, ethnicity, religion, class, etc.)

Examples of measures:
- Geographic distance to facility
- Availability of transport to facility
- Hours of operation of facility
- Absenteeism of health care workers from facility
- Affordability of services
- Availability of culturally and linguistically appropriate services

The situation: Unmet needs

- Unmet needs can reflect factors influencing access to health care
- Higher proportion of rural population than urban population, inequity than output
- Transportation is not major factor for utilizing health care in both rural and urban areas

The situation: Availability of resources

- Disparities in resource distribution and availability exist between regions and urban/rural areas
- Quality of health resource in disadvantaged areas is lower

The situation: Health care utilization

- Per capita doctor consultation in China was lower than that in Viet Nam and Sri Lanka
- Expected increase in health care utilization if access improved
The reform: Priorities to be addressed in access

- **Affordability**: to remove financial barriers
- **Availability**: to improve safe and quality of care
- **Accessibility**: to strengthen capacities of health providers/facilities in disadvantaged areas

The reform: Five priority areas 2009-2011

A. **Medical security.** Remove financial barriers and improve financial protection
   - To improve AFFORDABILITY
B. **Medicines.** Increase access to safe, quality essential medicines; reduce costs of pharmaceuticals
   - To improve AFFORDABILITY and AVAILABILITY
C. **Service delivery.** Strengthen capacities of primary health care system
   - To improve AVAILABILITY and ACCESSIBILITY
D. **Public health.** Improve equity and strengthen core public health services
   - To improve AVAILABILITY and ACCESSIBILITY
E. **Pilot hospital reform.** Pilot in 9 areas.

Progress: Coverage of rural health insurance scheme

- Rapid expansion of population coverage from 2003
- About 57% in 2010
- Rapid increase in premium level by the government
- In 2010, government subsidy per capita was 120 RMB
- In 2011, government subsidy per capita was 200 RMB
- High recognition and support by the rural population
- About 90% of the rural people show strong support to this scheme

Progress: Essential medicines policy

- **Selection of essential medicines for primary health providers**: 307(national)+X(provincial)
- **Purchasing**: Group purchasing at provincial level organized by the government
- **Zero-margin policy**: about half community and township health centers. Government subsidies reimburse the deficit.

Progress: Service delivery

- In 2009 and 2010, **40 billion RMB** from the central government was allocated to build and improve infrastructure:
  - 1,887 rural county hospitals;
  - 5,169 rural township health centers;
  - 11,250 rural village clinics; and
  - 2,382 urban community center.

From Minister Chen Zhu, speech on a conference on March 17, 2011

Progress: Public health

- Nine categories of basic public health care and six key public health programs
- In 2010: an average of per capita **17.5 RMB** was for covering costs of the 9 categories; 35 million hypertension patients, and 15 million diabetes were managed.
- In 2011, per capita **25 RMB** is allocated from the government for an extended package of public health care.

From Minister Chen Zhu, speech on a conference on March 17, 2011
Challenges

- In social health insurance schemes
  - How appropriate servicers can be included in the schemes (availability)?
  - How financial burdens of the insured can be really reduced, especially for the poor (financial barrier)?
  - How the three schemes are merged (equal access)?
- In essential medicine policy
  - How availability of basic drugs can be ensured in primary health organizations;
  - How government financial support can be sustained for operating the zero-margin policy.

- In service delivery
  - How health providers/facilities are interlinked and coordinated (access to a system not a single provider)?
  - How quality of care can be strengthened?
- In public health
  - How public health care is really equalized across regions, urban/rural areas, and population groups?

Thanks for your attentions!

Meng Qingyue
qmeng@bnu.edu.cn
www.chdis.edu.cn
Access to essential public health care equally in China health care reform

Lan Yao
Center for China’s Basic Medical Security Research
School of Medicine and Health Management, Tongji
Huazhong University of Science And Technology
April, 2011

Background
- China’s large population
- Significant regional differences
- Health spending per capita of Rich(20%) is 4.2 times to Poor(20%) in city.
- Health spending per capita of Rich(20%) is 2.87 times to Poor(20%) in rural.
- 2004, Infant Mortality Rate and Maternal Mortality Rate in rural are 2.4 times to city.

Health Care Reform in China
Steadily Equalize Access to Basic Public Health Services
- General Requirements: through institutional arrangement, focusing on prevention, so that people are acquired no disease, less disease, or less serious disease, or later acquirement.

Short-term goal: Basic public health services and interventions on key health problems cover all residents.
- Strengthen the government’s responsibility, strengthen construction of public health system
- The government formulates and provides essential public health packages free of charge, including 9 categories 21 items: health education, mental disease control and prevention, planned immunization, maternal healthcare, child healthcare, the elderly healthcare, chronic diseases and communicable diseases management.
- Per capita basic public health service fee ≥ 15 RMB in 2009 and 25 RMB in 2011

Steadily Equalize Access to Basic Public Health Services
- Steadily expand national key public health services programs: on those problems of specific diseases, important groups and special region, the government organized direct interventions.
  - Free in hospital delivery in rural areas
  - Supplementary hepatitis-B vaccination campaign for under 15 years old
  - Eradication of coal-burning fluorosis hazards
  - Administer folic acid for rural women before pregnancy and early pregnancy
  - Build hazard-free sanitary latrines
  - Perform cataract operations for 1 million poor patients free of charge
  - Conduct screening for women’s diseases

Most Recent Developments
- Steady equalize access to basic public health services
  - Supplementary hepatitis-B vaccination campaign for under 15-year old (60.01 million), free cataract operations for poor patients (0.57 million), eradication of coal-burning fluorosis hazards, screening for breast cancer and cervical cancer for women and other key public health programs have been push forward steadily.
  - 9 categories of basic national public health programs have been successfully implemented at grassroots-level health institutions. Per capita basic public health service subsidies is 17.4 RMB in 2010.
Strategy

- Financing
- Organization (standardize)
- Human resource allocation (training; volunteer)
- Performance evaluation
- Publicity

Performance evaluation

Item 1: Establish the maternal health care manual;
Item 2: Grasps the maternal quantity and distribution

Index 1: The rate of building maternal health manual >98% (1 point)
Index 2: Equipped with professional maternal health workers (2 points)……

Result (2010)

- 1.673 million women in rural area get free cervical cancer check.
- 0.434 million women in rural area get free Breast cancer check.
- 8.848 million women in rural area get subsidies in hospital delivery.

Discussion:

Equalization of public health services

- Equal Opportunity for all
- Equal result for all
- Bottom line equal

Thank you
Access to Pharmaceuticals in China

CHEN Wen Ph.D., Professor
Fudan School of Public Health
April 11, 2011

Pharmaceutical background

- Pharmaceutical expenditures (2008)
  - USD69 per person per year
  - 48.8% of total health expenditures
  - 2.1% of GDP

- Major policies
  - Essential medicines policies
  - Essential medicines list for primary health institutions
  - Zero markup between wholesale and retail prices
  - Province-based pooled bidding
  - Reimbursable drug list
  - Pricing management
  - Public bidding system

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- Pricing management
- Public bidding system

Availability of 247 selected essential medicines in the sample of hospital pharmacies (2007)

<table>
<thead>
<tr>
<th>Hospital/Level of Care</th>
<th>NEML-Chinese</th>
<th>NEML-Western</th>
<th>NEML-Chinese</th>
<th>NEML-Western</th>
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</thead>
<tbody>
<tr>
<td>Primary</td>
<td>(23%, 38%)</td>
<td>(22%, 37%)</td>
<td>(23%, 36%)</td>
<td>(20%, 35%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>(18%, 31%)</td>
<td>(4%, 35%)</td>
<td>(23%, 34%)</td>
<td>(28%, 39%)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>(23%, 35%)</td>
<td>(41%, 30%)</td>
<td>(22%, 16%)</td>
<td>(27%, 43%)</td>
</tr>
</tbody>
</table>

Availability of 247 selected essential medicines in the sample of hospital pharmacies (2007)

<table>
<thead>
<tr>
<th>Hospital/Level of Care</th>
<th>Chinese NEML</th>
<th>Western NEML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>(25%, 75%)</td>
<td>(25%, 75%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>(20%, 33%)</td>
<td>(22%, 34%)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>(16%, 24%)</td>
<td>(18%, 34%)</td>
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</table>

Access to pharmaceuticals in urban community health centers (2008)

<table>
<thead>
<tr>
<th>City Type</th>
<th>Big cities</th>
<th>Middle cities</th>
<th>Small cities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Medicines available</td>
<td>629.0</td>
<td>489.8</td>
<td>350.8</td>
<td>522.8</td>
</tr>
<tr>
<td>Western medicines (%)</td>
<td>70.6</td>
<td>75.8</td>
<td>88.7</td>
<td>75.1</td>
</tr>
<tr>
<td>In which: antibiotics</td>
<td>18.8</td>
<td>14.1</td>
<td>19.7</td>
<td>13.0</td>
</tr>
<tr>
<td>cardiovascular</td>
<td>17.6</td>
<td>18.5</td>
<td>7.8</td>
<td>15.8</td>
</tr>
<tr>
<td>imported</td>
<td>7.7</td>
<td>2.0</td>
<td>6.5</td>
<td>4.8</td>
</tr>
<tr>
<td>within essential list</td>
<td>88.8</td>
<td>86.4</td>
<td>82.7</td>
<td>86.9</td>
</tr>
<tr>
<td>within III drug list</td>
<td>85.4</td>
<td>76.9</td>
<td>65.3</td>
<td>78.9</td>
</tr>
</tbody>
</table>

Access to anti-hypertension medicines in urban community health centers (%)

<table>
<thead>
<tr>
<th>City Type</th>
<th>Big cities</th>
<th>Middle cities</th>
<th>Small cities</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Benazepril</td>
<td>37.8</td>
<td>40.0</td>
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<td>30.6</td>
</tr>
<tr>
<td>Perindopril</td>
<td>28.9</td>
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<td>9.1</td>
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</tr>
<tr>
<td>Ramipril</td>
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<td>3.3</td>
<td>0</td>
<td>8.3</td>
</tr>
<tr>
<td>Candesartan Shatan</td>
<td>15.6</td>
<td>3.3</td>
<td>9.1</td>
<td>10.2</td>
</tr>
<tr>
<td>Lisinopril</td>
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<td>6.7</td>
<td>0</td>
<td>10.2</td>
</tr>
<tr>
<td>Doxazosin</td>
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<td>0</td>
<td>1.9</td>
</tr>
<tr>
<td>Urapidil</td>
<td>11.1</td>
<td>0</td>
<td>9.1</td>
<td>7.4</td>
</tr>
<tr>
<td>Phentolamine</td>
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<td>10.0</td>
<td>39.4</td>
<td>25.9</td>
</tr>
<tr>
<td>Phenoxybenzamine</td>
<td>4.4</td>
<td>3.3</td>
<td>3.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Prinivastatin</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Access to pharmaceuticals in township hospitals

<table>
<thead>
<tr>
<th>County Type</th>
<th>County I</th>
<th>County II</th>
<th>County III</th>
<th>County IV</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>No. Medicines available</td>
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<td>488.4</td>
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<td>287.8</td>
<td>459.4</td>
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<tr>
<td>Western medicines (%)</td>
<td>79.6</td>
<td>82.5</td>
<td>67.1</td>
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</tr>
<tr>
<td>imported</td>
<td>2.4</td>
<td>1.7</td>
<td>0.3</td>
<td>0.2</td>
<td>1.4</td>
</tr>
<tr>
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<td>80.2</td>
<td>88.7</td>
<td>83.5</td>
<td>76.8</td>
<td>83.8</td>
</tr>
<tr>
<td>within CMS drug list</td>
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<td>81.6</td>
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<td>62.3</td>
<td>74.6</td>
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Access to pharmaceuticals in urban community health centers (2008)

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<td>0</td>
<td>0.5</td>
</tr>
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</table>
### Average expenditure per DDD for urban community health centers (yuan)

<table>
<thead>
<tr>
<th>Generics</th>
<th>Big city</th>
<th>Middle city</th>
<th>Small city</th>
<th>Total</th>
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<tbody>
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<td>Losartan</td>
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<td>5.47</td>
<td>6.54</td>
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<td>Captopril</td>
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<td>0.98</td>
<td>1.02</td>
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<td>0.09</td>
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<td>1.31</td>
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<td>-</td>
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<td>Methyldopa</td>
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<td>0.17</td>
<td>-</td>
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<td>Candesartan Shatan</td>
<td>5.42</td>
<td>1.97</td>
<td>5.06</td>
<td>4.89</td>
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<tr>
<td>Levamlodipine</td>
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<td>Enoxperid</td>
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<td>-</td>
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<td>3.64</td>
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</tr>
<tr>
<td>Ramipril</td>
<td>3.70</td>
<td>6.94</td>
<td>-</td>
<td>4.06</td>
</tr>
<tr>
<td>Fosinopril</td>
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<td>4.47</td>
<td>5.58</td>
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<td>4.06</td>
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<tr>
<td>Nitroprusside</td>
<td>14.53</td>
<td>7.78</td>
<td>19.48</td>
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</tr>
</tbody>
</table>
| Source: MoH. Pharmaceutical purchasing and utilization in primary health institutions. 2009

### Average per prescription expenditure as number of days’ household income

<table>
<thead>
<tr>
<th>Number of days’ household income</th>
<th>Large city</th>
<th>Middle city</th>
<th>Small city</th>
<th>County I</th>
<th>County II</th>
<th>County III</th>
<th>County IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.13</td>
<td>2.70</td>
<td>2.58</td>
<td>1.55</td>
<td>1.35</td>
<td>1.45</td>
<td>2.25</td>
</tr>
<tr>
<td>1</td>
<td>0.64</td>
<td>0.62</td>
<td>0.79</td>
<td>1.10</td>
<td>1.20</td>
<td>1.30</td>
<td>0.90</td>
</tr>
<tr>
<td>2</td>
<td>2.30</td>
<td>2.80</td>
<td>2.60</td>
<td>1.60</td>
<td>1.80</td>
<td>1.60</td>
<td>2.10</td>
</tr>
<tr>
<td>3</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>4</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
</tr>
<tr>
<td>5</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>6</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Source: MoH. Pharmaceutical purchasing and utilization in primary health institutions. 2009

### Mean availability of medicine in Shaanxi (2010)

<table>
<thead>
<tr>
<th>Public Hospitals (n=50)</th>
<th>Pharmacies (n=36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All medicines (n=47)</td>
<td>EML medicines (n=33)</td>
</tr>
<tr>
<td>Mean availability (standard deviation)</td>
<td>26.6% (28.1%)</td>
</tr>
</tbody>
</table>

Source: Yang SM and Fang Y. Medicine prices, availability, and affordability survey in Shaanxi province. 2010

## Summary

- Still not good availability and affordability of pharmaceuticals and high economic burden
- Equitable access to pharmaceuticals will be expected to improve with the implementation of essential medicine policies and extension of health insurance coverage
- Pharmaceutical utilization patterns and prescribing behaviors will be changed
- Rational use of medicines should be paid more attention to
Access to Social Health Insurance in rural China

Dr. Xiaoyun Liu
Peking University China Center for Health Development Studies
xiuliu@pku.edu.cn
www.chinacphc.org.cn
Westlake Forum III, Atlanta
10th - 12th April 2011

Multiple-layer Health Insurance System in China

Enterprise & supplemental insurance
Special population insurance
Commercial health insurance

Main schemes

Urban employee basic Medical Insurance
Urban resident basic medical insurance
New rural cooperative medical system

Safety net

Social medical aid in Urban and Rural

Changing rural health insurance

Population coverage of rural health insurance in China

Policy design of NCMS

- A type of social health insurance
- Aim to reduce financial burden due to illness and provide financial protection
- Heavy and increasing government subsidy
- Management at County level

Current progress of NCMS

- Benefit package from inpatient to outpatient services.
- Copayment for inpatient service: 80% to 60%.
- Management improvement: e.g. simultaneous reimbursement.
### Opportunities

- Financial capacity and strong political willingness of central government to develop and subsidize NCMS
- Rapid expansion in population coverage
- Increasing financial protection to rural populations

### Challenges

- **Financing sustainability**
  - Local government fiscal space
  - Legislation
- **Cost containment**
  - Provider payment reform: capitation and case payment
- **Integrated health insurance**
  - Do we need to combine the three SHI systems into one? How and when?
- **Management capability**
  - How to design benefit package with the rapidly increasing NCMS fund?
- **Health care quality**: a major concern

---

**Thanks**
The Experiences and Policy Reform of Medical Security for Migrant Workers in China

Jian Wang
Center for Health Management and Policy
Shandong University
10-12 April, Emory University, USA

Challenges

- Up to 2009, there are over 211 million migrant rural workers in China, and even by 2020, China will still have over 120 million migrant rural workers;

- A “cake”, but hard to “eat”.

- Although through institutional arrangement, 405 million enrolled into urban basic health insurance and 800 million enrolled in New Medical Cooperative Scheme, equitable access for migrant workers to the essential health care service within the health system still remains poor;

Measures to Solve the Challenges:

Health System Reform Plan

<table>
<thead>
<tr>
<th>Objective</th>
<th>To ensure universal coverage of essential health care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service delivery system</td>
<td>Primary Health Care System (public health and essential health services)</td>
</tr>
<tr>
<td>Social protection system</td>
<td>Free PHC by government’s facility</td>
</tr>
<tr>
<td>Strategies</td>
<td>Health Law: Health right</td>
</tr>
</tbody>
</table>

Challenges

- MMRs of permanent residents and floating population in 2005 (1/100000)

One of key tasks for 2009-2011

Expedite the construction of basic medical insurance system
- To ensure the participation rate of basic medical insurance scheme for urban and rural residents to reach 90% or higher.
  - Basic Medical Insurance System for Urban Employees
  - Basic Medical Insurance System for Urban Residents
  - New Rural Cooperative Medical Care Scheme
- To increase the reimbursement rate for inpatient services in insurance, and incorporate outpatient fees of common diseases and frequent diseases into medicare reimbursement.
- To resolve the insurance for university students, people employed flexibly, retirees from bankrupt state-owned enterprises, retirees and workers of ill-functioning companies, and farmer-turned workers.
- To appropriately address medical insurance for migrant population.
- To improve the urban and rural medical relief system.

Thank you
Meeting the Health Care Needs of Rural People

Keith J. Mueller, PhD
Director, RUPRI Center for Rural Health Policy Analysis
Chair, RUPRI Health Panel
Head, Department of Health Management and Policy
College of Public Health, University of Iowa

Presentation to the Westlake Forum III
Healthcare Reform in China and the US: Similarities, Differences and Challenges
Emory University, Atlanta, GA
April 10-12, 2016

Affordable Insurance Coverage
• Rural Cooperatives in China: design, use
• Medicaid in the United States
• Enrollment through Health Insurance Exchanges in 2014
• Question: What is the reach into rural places?
• Question: Are rural people benefiting?

Participating Providers in Rural Places
• Community Health Centers in China
• Safety Net Providers in the U.S.:
  • Rural Health Clinics
  • Community Health Centers
  • Critical Access Hospitals
• What does the future portend for the safety net?

Health Care Professionals in Rural Places
• Generalist physicians (in the U.S. Family Medicine, General Internal Medicine, General Pediatrics)
• Non-physician primary care providers (Nurse Practitioners, Advance Practice Nurses, Physician Assistants)
• Distribution of professionals into shortage areas

Iowa Primary Care Shortage Area

Transformations in Health Care Delivery
• Telemedicine
• Clinical teams, each member practicing to optimum skill level
• Patient-centered teams, including non-clinicians
Institution Based Services

- Small hospitals
- Skilled nursing facilities

Supporting Personal Responsibility

- Making information available and the role for information technology
- Facilitating personal action – role for health workers

For Further Information

The RUPRI Center for Rural Health Policy Analysis
http://cph.uiowa.edu/rupri

The RUPRI Health Panel
http://www.rupri.org

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Prevalence, disability and treatment of mental disorders in China

Michael R. Phillips
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WHO Collaborating Center for Research and Training in Suicide Prevention
Beijing Hui Long Guan Hospital
Departments of Psychiatry and Global Health, Emory University

Mental health services in China

Proportion of Total Disease Burden (using DALYs) for 6 Major Categories of Diseases and Injuries in China (2002)

<table>
<thead>
<tr>
<th>Category</th>
<th>% of all burden</th>
<th>Rank</th>
<th>% of all burden</th>
<th>Rank</th>
<th>% of all burden</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuropsychiatric Conditions and Suicide</td>
<td>20.3</td>
<td>1</td>
<td>18.9</td>
<td>1</td>
<td>21.8</td>
<td>1</td>
</tr>
<tr>
<td>Cardiovascular Diseases</td>
<td>12.6</td>
<td>3</td>
<td>12.8</td>
<td>2</td>
<td>12.4</td>
<td>2</td>
</tr>
<tr>
<td>Unintentional Injuries</td>
<td>11.5</td>
<td>3</td>
<td>14.1</td>
<td>2</td>
<td>8.5</td>
<td>3</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>9.7</td>
<td>4</td>
<td>11.0</td>
<td>4</td>
<td>8.3</td>
<td>4</td>
</tr>
<tr>
<td>Infectious/Parasitic Diseases</td>
<td>7.4</td>
<td>5</td>
<td>8.1</td>
<td>5</td>
<td>6.5</td>
<td>5</td>
</tr>
<tr>
<td>Sense Organ Diseases</td>
<td>7.2</td>
<td>5</td>
<td>6.5</td>
<td>5</td>
<td>7.9</td>
<td>7</td>
</tr>
</tbody>
</table>

From: National Burden of Illness Summary Tables, WHO, 2004

Macro measures that underlie the availability of services in China

- 2.23% of total health budget is allocated to mental health
- Less than 20% of population have health insurance that covers mental health
- About 1 psychiatrist per 100,000 population
- About 1 psychiatric bed per 10,000 population
- Average time spent in 5-year medical school on mental health topics: 40 hours
- Average time spent in nursing schools: none

Challenges to the development of mental health services in China (A)

- Few if any services in rural areas
- Urban services focused in specialty hospitals
- No incentives to provide community services
- Low status of mental health professionals
- General physicians don’t provide mental health services
- Stigma prevents sufferers from seeking care
- Social changes are leading to the need for new types of mental health services the current system is ill-equipped to provide
Challenges to the development of mental health services in China (8)

- No organized family movement to lobby for better services
- The legal framework for the protection and supervision of the mentally ill is not yet complete
- Difficult to implement cross-sectoral strategies to prevent and manage mental health problems
- Administrative structure for managing services is ineffective
- Low quality of mental health research

Rates of current mental disorders among 63,004 randomly selected community members 18 years of age and older from Shandong, Zhejiang, Qinghai and Gansu (2001-2005)

<table>
<thead>
<tr>
<th>Disorder</th>
<th>%</th>
<th>95% confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any current mental disorder</td>
<td>17.5%</td>
<td>16.6% - 18.5%</td>
</tr>
<tr>
<td>Mood disorders (i.e., depression)</td>
<td>6.1%</td>
<td>5.7% - 6.6%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>5.6%</td>
<td>5.0% - 6.3%</td>
</tr>
<tr>
<td>Substance abuse (primarily alcohol)</td>
<td>5.9%</td>
<td>5.3% - 6.5%</td>
</tr>
<tr>
<td>Psychotic disorders (schizophrenia)</td>
<td>1.0%</td>
<td>0.8% - 1.1%</td>
</tr>
<tr>
<td>Organic mental disorders</td>
<td>0.2%</td>
<td>0.2% - 0.3%</td>
</tr>
<tr>
<td>Other mental disorders</td>
<td>0.3%</td>
<td>0.3% - 0.4%</td>
</tr>
</tbody>
</table>

*adjusted for sampling design and clustering and post-stratified to sampling frame of 113 million adults

Disability and care-seeking among those with a current DSM-IV diagnosis

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Level of disability</th>
<th>Treatment seeking (in lifetime)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mild</td>
<td>moderate severe</td>
</tr>
<tr>
<td>ANY DIAGNOSIS</td>
<td>6322</td>
<td>75.9%</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>2657</td>
<td>61.1%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>2177</td>
<td>77.7%</td>
</tr>
<tr>
<td>Substance abuse disorders</td>
<td>1477</td>
<td>96.0%</td>
</tr>
<tr>
<td>Psychotic disorders</td>
<td>387</td>
<td>14.6%</td>
</tr>
<tr>
<td>Organic disorders</td>
<td>132</td>
<td>34.7%</td>
</tr>
<tr>
<td>Other disorders</td>
<td>153</td>
<td>59.4%</td>
</tr>
</tbody>
</table>

Care-seeking among persons with DSM-IV diagnoses who have mild and moderate-severe disability

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Mild disability (GAF&gt;40)</th>
<th>Moderate-severe disability (GAF&lt;40)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>none</td>
<td>non-mental health clinician</td>
</tr>
<tr>
<td></td>
<td>none</td>
<td>non-mental health clinician</td>
</tr>
<tr>
<td>ANY DIAGNOSIS</td>
<td>96.3%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>94.6%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>95.5%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Substance abuse disorders</td>
<td>99.1%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Psychotic disorders</td>
<td>43.9%</td>
<td>14.2%</td>
</tr>
<tr>
<td>Organic disorders</td>
<td>89.0%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Other disorders</td>
<td>88.3%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

Flowchart for the 4-province mental health epidemiological project in China
Reason Persons with Psychological Problems do not Receive Needed Care

- Lack of awareness that emotional problems they experience are due to an illness that can be treated
- Unwillingness to seek treatment due to stigmatization of mentally ill
- Concern that the employer or school will find out about treatment-seeking and cause problems for subject
- Lack of community-based mental health services
- Failure of general medical personnel to identify and treat depression and other common mental disorders
- Poor quality of available services
- High cost of treatment

Providing services to 173 million mentally ill Chinese

- Projecting our results to the nation, there are an estimated 173 million adults with current mental disorders in China among whom 158 million have never sought treatment. About one-quarter of them are moderately to severely disabled because of their condition.
- Addressing a problem of this magnitude in LMIC requires a major redistribution of limited societal and health resources that will only occur with the active participation of powerful political, economic, social and professional stakeholders in the community.
- Effective promotion of mental health in LMIC also requires a detailed appreciation of the historical trajectory of political, social, economic and health system changes in the country or region.

The most important question about mental illnesses is NOT

How many people are there with mental illnesses?

The most important questions are:

- What proportion of those who meet diagnostic criteria of mental illnesses have moderate to severe social or occupational disability due to the mental illness?
- Do those disabled due to mental illnesses and their family members know they have a treatable condition?
- Are they willing to seek psychological treatment?
- What treatment services are available to them?
- Are their general doctors able to recognize and treat common mental disorders?
- How affordable and effective are the available services?
Access to Mental Health Care And Disparities in the United States

Rahn Kennedy Bailey, M.D., F.A.P.A.
Chairman
Department of Psychiatry and Behavioral Sciences
Meharry Medical College
Nashville, TN

Behavioral/Mental health

• One out of three individuals has suffered from a mental health or substance abuse condition within the last 12 months.

• 36.2 million people paid for mental health services totaling $57.5 billion in 2006.

• 2007: Of the 95 million visits made to the emergency department (ED) by adults in the U.S., 12.0 million (12.5%) were related to Mental Health and Substance Abuse (MHSA).

• Most common MHSA reasons for ED visits: Mood disorder (42.7%), anxiety disorders (26.1%), & alcohol-related conditions (22.9%).

• Mood disorders and Schizophrenia: Two mental conditions ranked among top ten reasons for Medicaid hospitalizations, (210,000 and 112,000 stays).
Possible Reasons for Overrepresentation Psychiatric Emergency Services in African Americans:

- Personal, family and network stress distress in disadvantaged neighborhoods
- Countervailing prosocial trends in disadvantaged neighborhoods
- Lower tolerance for African Americans disruptive behavior
- African American communities greater stigmatizing attitudes
- African Americans may be more likely than whites to experience mental health crises that necessitate emergency visits.

Mental Health Care in Adolescents

- One is five youth is suffering from a mental illness.
- < 30% White adolescents were not receiving needed mental health care.
- 50% of minority adolescents were not receiving needed care.
- Adolescents of color have lower-income disproportionately and are less likely to be insured than white peers.
- Shame and stigma associated with psychological treatment: Strong impediment to minority youth than White youth in receiving needed care.

Landmark Surgeon General’s Report

2001: Mental Health: Culture, Race and Ethnicity.

Three Issues of Mental Health Care and Treatment Disparities:

A. People from racial and ethnic minority groups have less access to health care than do non-Hispanic whites.

B. Individuals from minority groups are less likely than individuals from nonminority groups to receive treatment for mental illness.

Consequences of Being Uninsured

- Most likely to miss preventive and routine care for chronic conditions.
- Incur risk to their finances
- More frequently hospitalized for conditions that are potentially avoidable.
- Communities pay a price for gaps in health insurance coverage of their residents.
Outline

- Quality measurement of hospital service
- Trend of the reform
- Problems in hospital quality measurement

Quality Management and Control Indicators for Tertiary General Hospitals (2011)

- 7 first level indicators
- 52 second level indicators
- 96 third level indicators
- 123 forth level indicators

First Level Quality Indicators

- Inpatient mortality
- Readmission
- Hospital infection
- Operation complication
- Patient safety
- Reasonable use of medicine
- Hospital performance

Second level quality indicators: Inpatient mortality

- Total Inpatient Mortality
- Neonatal Mortality
- Mortality of Surgical Patients
- Mortality of Diseases
- Mortality of Cancer
- Mortality of Patients with Return to OR
- Mortality of Operations Classified by ASA

Second level quality indicators: Readmission

- Readmission within 31 days
- Return to Operating Room
- Return to Intensive Care Unit
- Same-day CABG surgery rate after PCI
### Second level quality indicators: Hospital Infection

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Incidence of Hospital Infection</td>
</tr>
<tr>
<td>Operation Associated Infection Incidence</td>
</tr>
<tr>
<td>Pulmonary Infection in Surgical Patients</td>
</tr>
<tr>
<td>Hospital Infection Incidence of Neonates</td>
</tr>
<tr>
<td>Surgical Site Infection</td>
</tr>
<tr>
<td>Hospital Infection - Elective Surgical Patients</td>
</tr>
<tr>
<td>Surgical Site Infection Classified by NNIS Risk Index</td>
</tr>
<tr>
<td>Central Line-associated Bloodstream Infections in ICU</td>
</tr>
<tr>
<td>Ventilator-associated Pneumonia in ICU</td>
</tr>
<tr>
<td>Indwelling Urinary Catheter-associated UTIs in ICU</td>
</tr>
<tr>
<td>Hemodialysis-associated Bloodstream Infections</td>
</tr>
</tbody>
</table>

### Second level quality indicators: Operation complication

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postoperative Complications</td>
</tr>
<tr>
<td>Postoperative Pulmonary Embolism</td>
</tr>
<tr>
<td>Postoperative Deep Vein Thrombosis</td>
</tr>
<tr>
<td>Postoperative Sepsis</td>
</tr>
<tr>
<td>Postoperative Hemorrhage or Hematoma</td>
</tr>
<tr>
<td>Postoperative Wound Dehiscence</td>
</tr>
<tr>
<td>Postoperative Sudden Death</td>
</tr>
<tr>
<td>Complications in Death Surgical Patients</td>
</tr>
<tr>
<td>Postoperative Respiratory Failure</td>
</tr>
<tr>
<td>Postoperative Physiologic/Metabolic Derangement</td>
</tr>
<tr>
<td>Complication of Anesthesia</td>
</tr>
</tbody>
</table>

### Second level quality indicators: Patient Safety

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Ulcer</td>
</tr>
<tr>
<td>Birth Trauma Injury to Neonates</td>
</tr>
<tr>
<td>Obstetric Trauma Vaginal Delivery</td>
</tr>
<tr>
<td>Transfusion/Infusion Reaction</td>
</tr>
<tr>
<td>Foreign Body Left during Procedure</td>
</tr>
<tr>
<td>Iatrogenic Pneumothorax</td>
</tr>
<tr>
<td>Accidental Puncture or Laceration</td>
</tr>
<tr>
<td>Falls and the Severity Scores</td>
</tr>
<tr>
<td>Cesarean Section Rate</td>
</tr>
</tbody>
</table>

### Second level quality indicators: Reasonable use of medicine

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription indicators</td>
</tr>
<tr>
<td>Indicators of antimicrobial drugs use</td>
</tr>
<tr>
<td>Antimicrobial drugs use indicator of preoperative clean incision</td>
</tr>
</tbody>
</table>

### Second level quality indicators: Hospital performance

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource allocation</td>
</tr>
<tr>
<td>Workload</td>
</tr>
<tr>
<td>Treatment quality</td>
</tr>
<tr>
<td>Work efficiency</td>
</tr>
<tr>
<td>Patients burden</td>
</tr>
<tr>
<td>Assets operation</td>
</tr>
<tr>
<td>Scientific research achievements</td>
</tr>
</tbody>
</table>

### Recent Development: Clinical Pathway Management

- The first wave in 2009 includes 6 diseases
- The second wave in 2010 adds 2 diseases
- Mainly for tertiary general hospitals, submit information through internet to ‘Single Diseases Quality Management and Control System’ in 10 days after diagnosis and treatment of the above diseases.
Clinical Pathway Management Pilot

- Until the end of 2010, 1383 hospitals have participated the clinical pathway management pilot
- More than 300 clinical pathways have been established.

Thank You!
Quality Measurement

- Three key questions:
  1. What is the purpose of measuring quality?
  2. Which quality measures should be used?
  3. How will the quality measures be used?

- Answering question 1 is very helpful for answering questions 2 and 3

What is the Purpose of Measuring Quality?

- Common answers:
  - To help patients choose providers
  - To motivate providers to improve
  - To guide quality improvement efforts

- In the United States, studies suggest that patients rarely use reports of quality measure performance to choose their providers\(^1\)
  - Instead, patients tend to use word of mouth recommendations from relatives (~50%) or referrals from other providers (38%)\(^2\)

- Providers have some concerns about measuring quality
  - Are these data actually based on the care I deliver to my patients?
  - Are the performance data adjusted for patient characteristics?
  - How can I be sure that my performance rating isn’t just due to chance?

Validity and Reliability

- **Validity** is whether a measure represents what it is supposed to represent, rather than something else
  - If a measure is a “quality measure,” then it should represent the quality of care rather than having a younger or healthier patient population
  - Statistical adjustment is one way to improve validity
  - Providers often say “fairness” when they mean “validity”

- **Reliability** is the correlation between “true performance” and measured performance
  - In other words, the “signal-to-noise” ratio
  - The higher the reliability, the lower the role of chance
  - Increasing the sample size is one way to improve reliability
  - Providers often say “arbitrariness” when they mean “low reliability”

Which Kinds of Measures?

```
Structure
↓
Process
↓
Outcome
```

Avedis Donabedian, Milbank Quarterly, 1966

\(^1\) Faber et al, Medical Care, 2009.
\(^2\) Tu and Lauer, Center for Studying Health System Change, 2008.
Which Kinds of Measures?

- **Structural measures of quality**
  - The organization and capabilities of a provider
  - Example: possession and use of an electronic health record

- **Process measures of quality**
  - The delivery of certain services to patients
  - Examples: screening for colorectal cancer, testing cholesterol in diabetics

- **Outcomes measures of quality**
  - Inherently important results of care
  - Examples: mortality, quality of life, patient experiences of care

> When structural and process measures are valid, improvement on these measures also improves outcomes.

Are We Measuring the Right Things?

- Comprehensiveness of measures
  - Right now, there are over 1000 quality measures available in the National Quality Measures Clearinghouse (www.qualitymeasures.ahrq.org)
  - However, there are no quality measures for many important clinical services
    - For example, a lack of measures for diagnostic accuracy
  - Providers often worry that we are just trying to improve things that we can measure easily, rather than things that are important

Quality Improvement Efforts

- Multiple efforts are underway in the United States
  - Efforts in physician groups, hospitals, and health plans...not always organized together
  - Some efforts are aimed at specific outcomes
    - For example, efforts to reduce 30-day rehospitalization rates
  - However, some efforts are aimed at structural and process measures
    - For example, the "Patient-Centered Medical Home"
    - Primary care practices adopt new capabilities, without focusing on particular outcomes (in most cases)

Evaluator’s View on Quality Improvement

<table>
<thead>
<tr>
<th>Before intervention</th>
<th>After intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pilot providers</td>
<td>- Pilot providers</td>
</tr>
<tr>
<td>- Doing activities</td>
<td>- Doing different activities</td>
</tr>
<tr>
<td>- Producing results</td>
<td>- Producing different results</td>
</tr>
<tr>
<td>- Control providers</td>
<td>- Control providers</td>
</tr>
<tr>
<td>- Doing activities</td>
<td>- Doing same activities</td>
</tr>
<tr>
<td>- Producing results</td>
<td>- Producing same results</td>
</tr>
</tbody>
</table>

Quantitative Evaluation Design

- Performance vs. Time
- Intervention start date
- Pilot providers
- Difference attributed to intervention
- The dotted line can come from control providers, if available
Information Technology and Electronic medical records

-- Similarities, Differences and Challenges

Wang Caiyou
Center for Health statistics & Information, MOH
2011-4-12

The Vision of HIT & EMR

Where we are

How do we archive

Opportunity & Challenges

Contents

1. The Vision of HIT & EMR
2. Where we are
3. How do we archive
4. Opportunity & Challenges

The HIT can take a important role

January 20th 2004 the President George W. Bush announce 10 year plan, to set every having HER, to improve health care

The HIT can take a important role

Improving Patient Care with HIT

Accurate and complete information about a patient’s health, can give the best possible care, whether during a routine visit or a medical emergency.

The ability to better coordinate the care they give.

Patients and their families can more fully take part in decisions about their health care.

Information to help doctors diagnose health problems sooner, reduce medical errors, and provide safer care at lower costs.

Generations of EHR Capabilities

The care error to be reduced by

Gen1 (Collector) 15%
Gen2 (Documentor) 25%
Gen3 (Helper) 30%
Gen4 (Partner) 20%
Gen5 (Mentor) every preventable error will never happened
 MATURITY OF EHR DEPLOYMENT IS LAGGING. THE ROAD TO MEANINGFUL USE WILL REQUIRE SIGNIFICANT EFFORT, RESOURCES AND TIME TO MOVE THE NEEDLE TOWARDS EHR ADOPTION.
HIT Status in China

- HMIS were accepted by most of hospitals, that can improve efficient, control expense.
- Clinical information systems begin to been accepted by most of the hospital, the EMR begin to be accepted.
- The information sharing between more then one hospital with RHIN will kicking off.

3. Where we go?

- Opinion on Deepening the Reform of Health care System
eHealth vision: setting up functional and recourse sharing health information system
- Guidelines for the Pilots Public Hospital Reform
EMR-RHIO

HIT in national next 5 years plan

<table>
<thead>
<tr>
<th>No</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Basic Medical Insurance</td>
<td>Improve city level basic medical insurance rate, increase and insurance ability, achieve 100% in basic medical insurance.</td>
</tr>
<tr>
<td>02</td>
<td>Public Health Service</td>
<td>Improve medical services, health, and emergency etc., to enhance the basic health service in rural areas conditions.</td>
</tr>
<tr>
<td>03</td>
<td>Medical Service System</td>
<td>Improve rural medical service system, improve medical service level, improve medical service level for the rural public, improve medical service level for the rural public.</td>
</tr>
<tr>
<td>04</td>
<td>EMR-RHIO Planning</td>
<td>Improve the planning of EMR-RHIO, enhance the planning of EMR-RHIO, improve the planning of EMR-RHIO, improve the planning of EMR-RHIO.</td>
</tr>
<tr>
<td>05</td>
<td>Sharpening Medical Informationization</td>
<td>Improve the planning of EMR-RHIO, enhance the planning of EMR-RHIO, improve the planning of EMR-RHIO.</td>
</tr>
</tbody>
</table>

3 How do we archive

- Service provider: Quality Control, M&E
- Owner of provider: Quality, Benefit, Safety, Essential drug policy.
- Payer: DRGs: fee control, infection
- Precondition: Information standard, data resources service and utilization mechanism, data sharing platform.
Recent task for eHealth

- Blueprint of eHealth: National eHealth strategy plan in the next 5 years, object, milestone, task;
- Information standard infrastructure, information privilege and safety infrastructure;
- Pilot of RHIO based on Resident Health Record and EMR;
- Information system related with health care reform, program monitor and evaluation, & need from reform.

4 Opportunity & Challenges

- The leadership and management
- The budget for EMR;
- The health care reform;

The challenges of HIT Adopting

1. Leadership and organization
   - Harmonization of various stockholders
   - Establish the RHIO on National/Province Levels
   - Constitute Laws/Regulations/Policies
2. Investment
3. IT Technologies
   - Lack of Health Information Standard
   - Lack of Correct Methodologies
   - What is the new generation interoperable infrastructure?
4. Desperately Lacking of High Quality Human Resource
   - Education
   - Quality
   - Team Organization

Thank you

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